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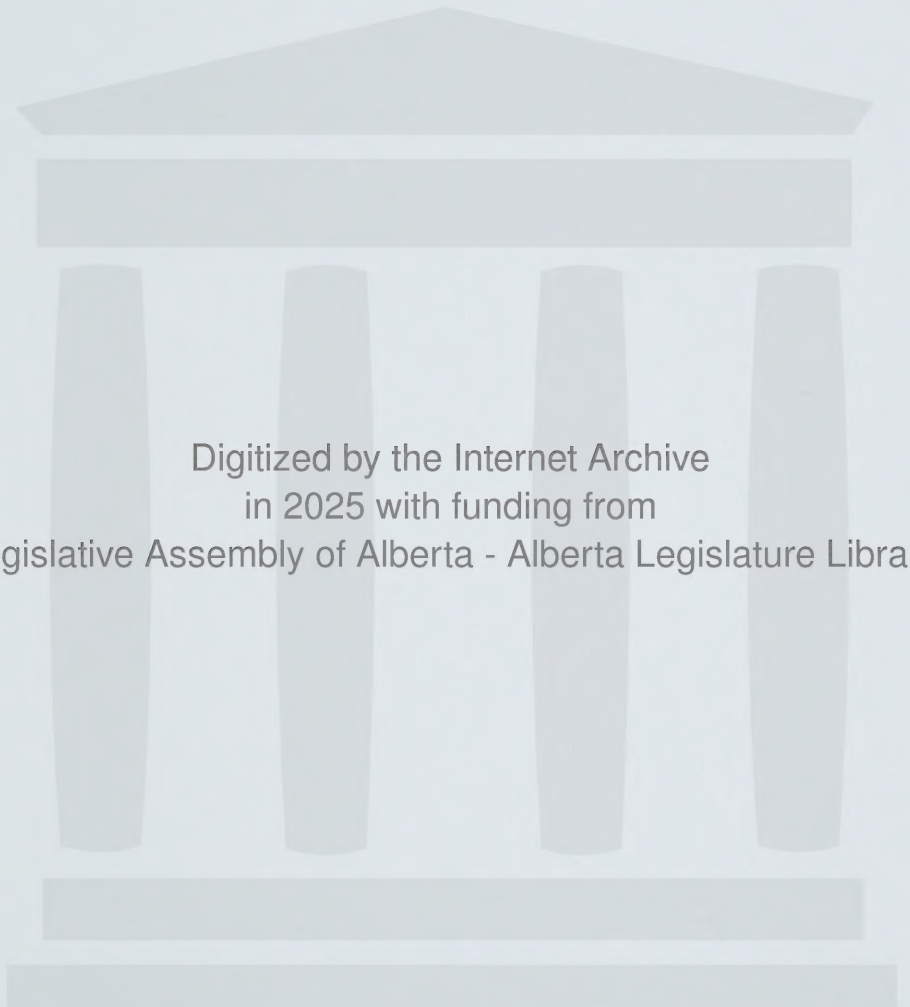

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DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

RAPID CALCULATION.

NOTE: Answers only are to be put on this paper, which is to be handed in with the Arithmetic paper. Calculation may be done on another sheet.

Time—Thirty minutes.

Values.

1 **1.** 9 doz. oranges at 3 for a quarter will cost.....

2 **2.** $31\frac{1}{2}$ gal. of vinegar at $33\frac{1}{3}$c a gal. will cost.....

1 **3.** 3.625 tons of coal is the same as.....lbs.

2 **4.** A ton and a half of wheat seed is the same as..... bus.

2 **5.** The value of 11500 lbs. of coal at $8.20 a ton is.....

1 **6.** The total weight of three stacks of hay containing $17\frac{3}{4}$ tons, $14\frac{5}{8}$ tons and $12\frac{1}{2}$ tons is.....tons.

2 **7.** A doz. and a half bottles each containing $\frac{7}{8}$ gals. were filled from a barrel containing $31\frac{1}{2}$ gals. How much is left in the barrel?.....gals.

2 **8.** If 3.75 tons of coal heat a house for a month, how many months will 45 tons last?.....

2 **9.** The interest on $24.75 for 2 yrs. 9 mos. at 8% per annum, simple interest, is.....

[OVER]

Values.

1 **10.** Cost \$324. Loss $11\frac{1}{9}\%$. Selling Price.....

1 **11.** Cost \$240. Loss \$20. Loss per cent.....

2 **12.** Insurance \$3600. Rate $\frac{3}{4}\%$. Premium.....

1 **13.** The value of 10,000,000 bushels of wheat at 93.8 cents a bushel is.....dollars.

20

DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

ENGLISH LITERATURE AND SPELLING.

Time—Two and one-half hours for Papers I and II.

PAPER I.—SPELLING.

1. acknowledge
2. allegiance
3. amateur
4. belief
5. benefit
6. business
7. colonel
8. comparative
9. conscience
10. courteous
11. descendant
12. emergency
13. exhibition
14. February
15. forfeit
16. garage
17. guarantee
18. gymnasium
19. lawyer
20. library
21. license
22. lieutenant
23. luncheon
24. luxuriant
25. malicious
26. marriage
27. mischievous
28. mortgage
29. musician
30. occurred
31. orchestra
32. parliament
33. participle
34. persuade
35. physician
36. prejudice
37. privilege
38. prophecy
39. pursuit
40. receipt
41. recommend
42. separate
43. shepherd
44. sheriff
45. sieve
46. similar
47. syllable
48. victuals
49. villain
50. woollen

DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

ENGLISH LITERATURE AND SPELLING.

Time—Two and one-half hours for Papers I and II.

PAPER II—ENGLISH LITERATURE.

Values.

9 **1.** "..... told them, with an air of a man who would not give his judgment rashly, that much might be said on both sides."

Describe the two incidents in connection with which this remarkable judgment was given. Who gave it in each case? Describe the man who had provoked the first dispute.

10 **2.** The following authors are represented in your Literature work this year—John Henry Newman, Cyrus W. Field, Robert W. Service, Sir William Watson and Duncan Campbell Scott.

Tell something about each author and name the selection written by him.

10 **3.** Mention *five* ways in which Antony appeals to the mob in order to win them to his purpose.

9 **4.** "Then come back happy we have done
Our mother's service—I, the son,
As you the daughter of our land."

Describe the service of each referred to in the quotation.

Or

What is a Palmer? Who was the Palmer referred to?

Describe the part played by him in the story prescribed for study.

Values.

10 **5.** "Deposuit potentes
De sede, et exaltavit humiles."
What is the meaning of these words?
Why did King Robert object to them?
How was their truth made clear to the king?
What is the final picture given of the King?

Or

Describe the experiences of the Norwegian fisherman from the time when he exchanged his hold on the ring bolt for the water barrel until he was picked up by "the merry fishermen of Lofoden."

10 **6.** Write notes explaining clearly the meaning of or the references contained in *any five* of the following:

(*a*) "Or Eleanor's undaunted son
. . . . . .
Lies vainly great at Fontevraud."

(*b*) "On St. John's eve, at vespers, proudly sat
And heard the priests chant the Magnificat."

(*c*) "All the ship's crew joined to lift the heavy shore end off the Great Eastern into the boats."

(*d*) "In the little Crimson Manual there's no such word as fail."

(*e*) "Here and here did England help me."

(*f*) "The chief messengers from the outside world were itinerant preachers and Yankee pedlars."

(*g*) "Who, though he had no hand in his death, shall receive the benefit of his dying, a place in the commonwealth?"

7 **7.** Complete the following quotations:

(*a*) "I vow to thee, my country—(six lines)—all earthly things above."

(*b*) "Oh, to be in England"—(eight lines).

(*c*) "Behold, the fear of the Lord"—(three lines).

10 **8.** Name the selections from which *any five* of the following quotations are taken and show the connection of each with the rest of the selection:

(1) "The evil that men do lives after them,
The good is oft interred with their bones."

(2) "Under the Angel's governance benign
The happy island danced with corn and wine."

Values.

(3) "As thou didst help our fathers,
Help thou our host today!"

(4) "The depth saith, It is not in me:
And the sea saith, It is not with me."

(5) "A man built like a mountain-tower,
A fortress of heroic thew;
The Conqueror, in our soil who set
This stem of Knighthood flowering yet."

(6) "Unconscious heroes of the waste, proud players
of the game,
Props of the power behind the throne, upholders
of the name."

(7) "I am that man upon whose head
They fix the price, because I hate—"

DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

HISTORY AND CIVICS, AND GEOGRAPHY.

Time—Two and one-half hours.

HISTORY AND CIVICS.

Values.

15 **1.** With what great events in the History of the British Empire was *each* of the following connected? (*a*) Simon de Montfort (*b*) Sir Francis Drake (*c*) Nelson (*d*) Watt (*e*) Florence Nightingale (*f*) Lord Roberts (*g*) Washington (*h*) Captain Cook (*i*) Lloyd George (*j*) Clive.

Or

Write careful notes on *any three* of the following and show their effects on the growth of liberty or freedom of the people of England: Magna Charta; Wars of the Roses; Great Rebellion of 1642; French Revolution.

12 **2.** Write a note on *any four* of the following: Lord Durham; Joseph Howe; Louis Riel; Sir Arthur Currie; Alaskan Boundary; Natural Resources Question; Treaty of Washington, 1871.

Or

Write a note on the British North America Act of 1867, stating:

5 (*a*) Conditions that rendered necessary a change in the form of Government.

3 (*b*) The form of Government established. (Explain clearly.)

1 (*c*) Portions of the *present* Dominion that formed the original in 1867.

1 (*d*) Portions of the present Dominion added later.

2 (*e*) Conditions under which British Columbia entered Confederation.

3. Write an account of the Great War under these heads:

3 (1) Causes.

3 (2) Three engagements in which Canadian troops took part.

2 (3) Jutland *or* Zeebrugge.

1 (4) League of Nations.

Or

(*a*) Write a note on the inventions introduced in the spinning and weaving industries in the 18th century.

(*b*) Show how the application of machinery to industry affected the distribution of population.

(*c*) Write a note on the Reform Bill of 1832 and show clearly how the above movements brought it about.

4. Name *five* of the chief sources of revenue and *five* of the chief items of expenditure of *either* the Dominion of Canada *or* the Province of Alberta.

GEOGRAPHY.

5. Locate and state *one* interesting or important fact about *each* of the following: (*a*) Jamaica (*b*) Trinidad (*c*) Zanzibar (*d*) Hong Kong (*e*) St. Helena (*f*) Tasmania (*g*) Falkland Islands (*h*) Rangoon (*i*) Papua (*j*) Chicago.

6. State the differences that exist between India and Canada in respect to—

(*a*) Position and general climate.

(*b*) Number and type of inhabitants.

(*c*) Imports from Great Britain.

(*d*) Exports to Great Britain.

(*e*) Political relations with Great Britain.

CANDIDATES WILL ANSWER ONLY *TWO* OF THE FOLLOWING QUESTIONS:

7. Draw a map of the three prairie provinces marking in and naming the 49th and 60th parallels of N. Latitude, the Saskatchewan River and its branches, Edmonton, Prince Albert, Banff, Calgary, Lethbridge, Medicine Hat, Regina, Saskatoon, Winnipeg, four coal areas, one irrigation district and the main line of one transcontinental railway. (Make map about 10 inches from East to West.)

8. Two British ships sail from England to Australia, one going eastward and the other westward.

(*a*) Outline the route which the east-bound ship might take, naming *five* parts of the British Empire which it might pass. Explain the importance to the Empire of *any three* of these places.

(*b*) Outline the route which the west-bound ship might take and name three important products which it might bring back to England on its return journey over the same route and the places where they are produced.

9. On the outline map provided locate the following:

(*a*) Four coastal waters. 2

(*b*) Four rivers. 2

(*c*) Six important cities. 3

(*d*) Centres of cotton, woollen, iron, coal, pottery and cutlery industries. 6

(*e*) Places of origin of Berkshire swine and Hereford cattle. 2

N.B.—Detach the map from the question paper and enclose it in your answer envelope.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

ARITHMETIC AND MENSURATION.

Time—Two hours.

(Candidates may take *any four* questions).

Values.

1. In a certain city the assessment is $15,000,000 and the tax rate is made up as follows:

12 mills on the dollar for interest
20 mills on the dollar for schools
15 mills on the dollar for streets and parks
2 mills on the dollar for health
6 mills on the dollar for salaries.

6 (*a*) Represent this by means of a graph.

5 (*b*) Find the total taxes paid by a man whose property is assessed for $5475.

5 (*c*) How much is collected for streets and parks?

4 (*d*) Express the total rate as a percentage of the assessment.

2. There are two wagon boxes, one rectangular in shape 12 ft. long, 3 ft. wide and 3 ft. 4 in. deep, the other in the form of half a cylinder (that is, the end is a semi-circle), 14 ft. long and 4 ft. in diameter. The first is filled with barley worth 62$\frac{1}{2}$c. a bu. and the second with wheat worth $1.76 a bu.

16 (*a*) Find the value of each load.

(*b*) Which is the heavier load and by how much? (Allow 6$\frac{1}{4}$ gal. to the cubic foot.)

Values.

3. On Aug. 16th, 1923, Geo. Brown of Airdrie bought of the Massey-Harris Co. through their agent, Peter Spence, a binder, for $575. He gave in payment $100 in cash, a cheque on the Bank of Montreal, Calgary, for $200, and for the balance his note at 9 mos. bearing interest at 8% per annum.

3 (*a*) Write a receipt for the cash.

3 (*b*) Write the cheque.

3 (*c*) Write the note.

3 (*d*) Give the date on which the note will be legally due.

8 (*e*) Find the amount that will pay the note when it is due.

4. A man bought a lot 33 ft. wide and containing $\frac{1}{8}$ of an acre. On it he built a house 24 ft. wide and 30 ft. long and a garage 12 ft. wide and 18 ft. long. Find:

5 (*a*) The cost at $1.25 per yard of wire fencing to enclose the lot.

5 (*b*) The cost at $45 per thousand of plank 2 in. thick to floor the garage.

5 (*c*) The cost at 60c per cubic yard of digging a cellar $4\frac{1}{2}$ ft. deep under the house.

5 (*d*) The cost at 15c a square yard of levelling and seeding that part of the lot not covered by the buildings.

5. A commission merchant in the month of May sold for one customer 325 tons of wheat at $1.50 per bushel at a commission of $2\frac{1}{2}$%, and bought for another customer 170 tons of oats at $62\frac{7}{8}$c per bushel at a commission of $1\frac{3}{4}$%. He deposited both commissions in the bank at 3% interest per annum, compounded half-yearly.

5 (*a*) Find the commission for selling the wheat.

5 (*b*) Find the commission for buying the oats.

10 (*c*) Find the amount at the man's credit in the bank at the end of 18 months.

6 **6.** (*a*) A man bought two horses at $240 each. He sold one at a profit of $16\frac{2}{3}$% and the other at a loss of $6\frac{1}{4}$%. Find the total selling price of the two.

Values.

3 (*b*) Find the total loss or gain per cent on the two horses.

8 (*c*) The same man sold two cows at \$60 each. On one he gained 20% and on the other he lost 20%. Find the total cost of the two.

3 (*d*) Find the total loss or gain per cent on the two cows.

80

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GEOMETRY (1).

(GRADE IX)

Time—Two and one-half hours.

Values.

6 **1.** (*a*) Explain and illustrate with drawings each of the following: right angle, acute-angled triangle, supplementary angles, plane rectilineal figures.

5 (*b*) Construct accurately a triangle the base of which is 2 inches in length, one angle at the base 50° and the angle at the vertex 75°. What kind of a triangle is it?

8 **2.** (*a*) If two triangles have two angles of one equal to two angles of the other, each to each, and, therefore, the third angles in each equal, and a side of the first equal to the corresponding side of the other, the triangles are equal in all respects. I-7.

4 (*b*) If a perpendicular be dropped from the vertex of an isosceles triangle to the base, it will bisect the base.

4 (*c*) On opposite sides of the straight line AB, angle BAC is made equal to angle ABD and AC=BD. Show that CD and AB bisect each other.

6 **3.** (*a*) The sum of all the interior angles of a polygon of n sides is equal to $2n$—4 right angles.

2 (*b*) What is the magnitude of each interior angle of a figure of 15 equal sides?

Or

2 Each exterior angle of a regular figure is $\frac{2}{5}$ of a right angle. How many sides has the figure?

[OVER]

Values.

8 **4.** (*a*) If one angle of a triangle be greater than another the side opposite the greater angle is greater than the side opposite the less. I-14.

6 (*b*) The difference of any two sides of a triangle is less than the third side.

8 **5.** (*a*) The opposite sides and angles of a parallelogram are equal to one another and the diagonal divides it into two triangles equal in all respects. II-5.

2 (*b*) In the above proposition, what are you given to start with (hypothesis)?

6 (*c*) The two diagonals of a parallelogram are 2 inches and $1\frac{1}{2}$ inches respectively. Construct the parallelogram. What is the largest possible area?

8 **6.** (*a*) Triangles on the same base and between the same parallels are equal in area. II-7.

5 (*b*) ABC is a triangle and D is the middle point of the base BC. If E be any point in AD, prove that the triangles EAB, EAC are equal in area.

9 **7.** (*a*) To describe a parallelogram equal to a given quadrilateral and having an angle equal to a given angle. II-12.

6 (*b*) On the base of a given triangle construct an isosceles triangle equal to it in area.

7 **8.** Bisect a parallelogram by a straight line drawn through a given point within the parallelogram.

100

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DEPARTMENTAL EXAMINATIONS, 1925

ALGEBRA (1).

(GRADE IX)

Time—Two and one-half hours.

Values.

3 **1.** If $a=3$ and $b=-5$ find the value of $3a^2-2ab-b^3$.

5 **2.** If $C=\frac{Ka-b}{a}$, solve for K in terms of a, b and C.

6 **3.** Simplify:

$$4(a-2b+c)-3(b-2c+a)-2(-4a-5b+5c).$$

7 **4.** Solve the equation

$$(3x-2)^2-(x-7)(x-2)=(3-2x)^2-(5-2x-4x^2).$$

3 Verify the result obtained.

6 **5.** Find the remainder when $x^4-6x^3+3x^2-4x+5$ is divided by x^2-7x+3.

6 **6.** Solve the equation $\frac{2x-5}{6}+\frac{x+2}{4}-\frac{3x-1}{5}=0$.

3 Verify the solution.

Or

9 Simplify:

$$\frac{x^2-5x+6}{2x^2+x-3}\times\frac{x^2+4x-5}{x^2-7x+10}\times\frac{6x^2+5x-6}{x^2+2x-15}$$

[OVER]

Values.

12 **7.** An automobile travels—

x miles at the rate of 24 miles per hour.

$x+5$ miles at the rate of 30 miles per hour.

$x+8$ miles at the rate of 32 miles per hour.

The total time taken for the journey is $4\frac{2}{3}$ hours. Find x.

5 **8.** Factor: a^3-64ab^4.

5 **9.** Factor $8a^3+y^3$.

5 **10.** Factor $ax^2+a^2x-9a-3a^2$.

5 **11.** Factor $x^3-(y-2a)^3$.

6 **12.** Factor $4x(y+b)+4x^2+(y+b)^2$.

8 **13.** Solve for x and y in the equations

$$\frac{3x+1}{2}=5+\frac{y+8}{5}$$

$$\frac{y+5}{3}=2+\frac{x+3}{4}$$

3 Verify the solution.

12 **14.** A man spends \$100 in buying two kinds of silk at \$4.50 and \$4 a yard. By selling it all at \$4.25 a yard he gains \$2. How much of each did he buy?

Or

How much tea worth 30c a pound, must be mixed with 60 pounds of tea worth 45c a pound to give a mixture worth 42c a pound?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GENERAL SCIENCE

(GRADE IX)

Time—Two and one-half hours.

Values.

3 **1.** (*a*) Give *three* sources from which carbon dioxide gas finds its way into the air. What physical characteristic of this gas makes it available for plants?
3

6 (*b*) Explain photosynthesis, showing the special structure of leaves which enables them to use carbon dioxide.

2 **2.** (*a*) Why does air exert pressure?
2 How is this pressure measured?
4 Name *four* things you have observed that are caused by air pressure.

5 (*b*) Draw a diagram and explain the action of a common air pump.

5 **3.** (*a*) Name *ten* important and distinct uses of water.

3 (*b*) Explain how it is possible for steel vessels to float on water, while a lump of steel sinks when put into water.

2 (*c*) How would you determine whether a basin of
1 water is hard or soft? How would you make hard water soft?

2 (*d*) Account for the cooling effect noticed when perspiration is evaporated from the face by fanning.

4 **4.** (*a*) Name *four* distinct conditions to which plants must adapt themselves in order to live.

[OVER]

Values.

6 (*b*) Name and show the fitness of *six* special adaptations in the body forms of plants which assist them in their struggles for existence.

9 **5.** (*a*) Name *three* animals (one a mammal, one a bird and one an insect), that show distinct adaptations in body form which make them effective in getting their food. Name *three* from the same groups that show adaptation for self-protection and *three* that show adaptation for the caring for their young.

3 (*b*) Show that the energy possessed by animals and plants, and used by man, comes from the sun.

5 **6.** (*a*) Name *five* distinct examples, *one each,* of the different forms of energy.

2 (*b*) What is meant by transformation of energy? Give *two* examples.

6 (*c*) What are the mechanical advantages of (1) a lever (2) a pulley (3) an inclined plane?

5 **7.** (*a*) Outline a theory that explains the formation of the coal areas in Alberta.

10 (*b*) What are *five* great soil-making agents? Tell how each is effective.

5 **8.** (*a*) What is included in the solar system? Explain the relation of the different parts of the system to each other.

2 (*b*) Show by diagram how to locate the North Polar Star on a clear night.

5 (*c*) Explain, using a diagram, the regular succession of summer and winter as we experience it year after year in our portion of the globe.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

HISTORY (1).

(GRADE IX)

Time—Two and one-half hours.

Values.

1. Describe the ways in which men had progressed in civilization down to the invention of writing.

Or

"Persia's services to the world were three."—West.

5 (*a*) Draw a sketch-map showing the extent of the Persian Empire about 490 B.C.

11 (*b*) Show in some detail what Persia's three great services to the world were.

2. "Like Solon, Clisthenes might easily have made himself tyrant. But, with splendid faith, he chose to work as Solon had done, to found government by the people."—West.

17 Describe the early government of Athens and trace the growth of government by the people down to the time of Clisthenes.

Or

17 Compare every-day life in the Age of Pericles with that of our own day.

3. "Thus Alexander's victories enlarged the map of the world once more, and made these vaster spaces the home of a higher culture."—West.

17 Give an account of the career of Alexander the Great, estimating its results for the history of the world.

[OVER]

Or

Values.

5 (*a*) On a sketch-map show the extent of the Roman and Carthaginian Empires at the beginning of the Second Punic War.

12 (*b*) Outline the struggle, showing clearly why Rome finally gained the victory over Carthage.

8 **4.** (*a*) What were the chief evils of Roman society against which the Gracchi brothers strove?

9 (*b*) Give an account of their reform measures.

Or

17 Describe the main features of government and society under the Early Empire.

5. "During the two centuries of fusion two organisations grew up in Europe—the Frankish state and the Papacy."—West.

17 Trace the rise of these two powers down to the end of the reign of Charlemagne, showing how each helped the other.

Or

"The indirect results of the Crusades were vastly more important than the recovery of Palestine would have been."—West.

8 (*a*) Describe the main features of Mohammedan culture during Europe's "Dark Ages."

9 (*b*) What were the causes and the results of the great Crusade movement?

16 **6.** Give an account of the rise and organisation of town life in the Middle Ages.

Or

Write notes on:

9 (*a*) The Peasants' Revolt of 1381 in England.

7 (*b*) The growth of the power of Parliament during the Hundred Years' War.

100

DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

AGRICULTURE, PHYSIOLOGY AND HYGIENE, AND ART.

Time—Two and one-half hours.

AGRICULTURE.

N.B.—Tests are provided on both Section 1 and Section 2. Candidates shall write on *one* Section only. *Either* section will be accepted.

SECTION I.

Values.

1. Describe wheat production under the following headings:

2 (*a*) The names of *two* varieties of Spring Wheat well suited for growing in Alberta.

3 (*b*) The names of *four* wheat products.

2 (*c*) The names of *two* enemies of the wheat plant.

3 (*d*) The conditions of soil and climate best suited for the production of wheat of good market qualities.

6 **2.** (*a*) What are *two* important uses to a plant of (1) its leaves, (2) its stem, (3) its roots?

5 (*b*) (1) Name *five* legumes which grow in Alberta.

4 (2) Name *two* features by means of which you would know plants of the legume family from those of other families.

2 **3.** (*a*) Name (1) *one* breed of hen which ranks high in egg production (2) *one* breed which ranks high for meat purposes.

3 (*b*) Describe poultry raising under the following headings:

(1) The care of the eggs before setting.

(2) The care of the hen while brooding.

(3) The care of the young chicks.

2 (*c*) Tell both how and why (1) eggs are candled, (2) eggs are graded.

Values.

3 **4.** (*a*) Give *three* important reasons why it is desirable to adopt diversified or mixed farming in Alberta.

4 (*b*) Of what advantage is it, in mixed farming, to keep a flock of sheep?

2 (*c*) Name *one* breed of sheep well suited for mutton production and *another* breed valuable for wool production.

40

SECTION II.

4 **1.** (*a*) Describe, using drawings, the structure of the seed of the corn.

2 (*b*) What are the functions or uses of the tassels and silk of the corn plant?

1 (*c*) Account for the fact that the grains of corn of the same *ear* are not always all of the same color.

2. Write an account of *each* of any *five* of the weeds named below, under the following headings:

5 (*a*) How to recognize each.

5 (*b*) Why specially harmful.

5 (*c*) How to eradicate.

The weeds are couch grass, death camas, tumbling mustard, loco weed, Russian thistle, wild sunflower, tall larkspur, perennial sow thistle, ball mustard and Canada thistle.

3. Write accounts of sand, clay and humus under the following headings:

3 (*a*) Origin.

3 (*b*) Agents which act in forming them.

3 (*c*) Capacity for moisture.

2 (*d*) The importance of humus and clay in soils.

2 **4.** (*a*) Name *two* small fruits which flourish under cultivation in Alberta.

(*b*) Tell how you would commence producing *each* of the fruits named in (*a*) under the following headings:

1 (1) The preparation of the soil.

2 (2) The parts of the plant from which you would produce new plants.

2 (3) State *two* conditions which it is necessary to observe in planting the parts selected in (2) in order to insure successful growth.

40

PHYSIOLOGY AND HYGIENE.

Values.

2 **1.** (*a*) Name the principal divisions of the human skeleton.

2 (*b*) State the position in the skeleton of one ball-and-socket joint and one hinge joint.

1 (*c*) Of what use is the skeleton to the body?

2 **2.** (*a*) What is the function or use of the lymph in the human body?

6 (*b*) Where are *three* of the following organs located in the human body and what is the use or work of each: (1) the heart, (2) the lungs, (3) the stomach, (4) the liver?

3. (*a*) Why does the air in a schoolroom and in our bedrooms become foul after they have been in use for some time?

1 (*b*) Tell how you would improve the bad condition referred to in each case in (*a*).

1 (*c*) State the temperature which the thermometer in your schoolroom should indicate in order that the pupils may be comfortably warm.

4. Write an account of the effects of drinking alcoholic liquors under the following headings:

(*a*) The effect on the heart and blood vessels.

(*b*) The effect on the brain.

ART.

NOTE: 1. Answer any *two* questions.
2. Make all drawings as large as the paper will allow.
3. Use foolscap for question 5.

Values.

20 **1.** Make a drawing of the corner of a room, as an example of angular perspective. Show a window placed in position in this room.

20 **2.** Make a pencil drawing showing light and shade and shadow of a box with the lid open. Let this be an example of angular perspective.
NOTE: *Do not use a ruler in making this drawing.*

20 **3.** Make a drawing of what you think is a good design for a book cover. Use a decorative landscape as an illustration and make the title in modified line capital letters. Work as follows: (*a*) Plan your sketch. (*b*) Fill in the details of lettering and drawing. (*c*) Color part of the sketch to show your color plan.

Values.

20 **4.** Draw a plan of a small city park size 500 feet by 250 feet. Draw this to scale and show the position of walks, flower beds, trees, shrubs, etc. Color part of your work and state what scale you are using.

Or

Draw the front elevation of a small two storey house. Give the dimensions of the various features.

20 **5.** Write a description of the given picture.

(1) Tell the story of the picture, referring to the figures, clothing, expression, etc.

(2) Mention details of the clever composition shown in the picture.

(3) Name the artist and mention other pictures painted by him.

(4) Give any other features worthy of comment.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

GRAMMAR AND COMPOSITION.

N.B.—You are expected to review, revise and rewrite your answer paper before handing it in.

Do not use your own name and address in answering question 7.

Time—Three hours.

GRAMMAR.

Values.

1. Upon *pretences* which were often very slight and *unreasonable their* persons and property were exposed to every turn of popular fury. Norman, Saxon, Dane and Briton though they were adverse to each other in *most* matters all *looked* with detestation upon a people *whom* they accounted it a point of religion to despise and to persecute. If this common hatred had not existed among *these* peoples they would in all likelihood have found that agreement was impossible. Such was the *state* of things at the beginning of the century.

12 (*a*) From the above sentences select *four* subordinate clauses and state the classification and relation of each.

12 (*b*) Parse the italicised words, giving the classification, inflection and relation of each.

2. Give the detailed analysis of these sentences:

4 (*a*) Other facilities we found that we had not discovered before.

3 (*b*) To make another attempt was folly and madness.

3 (*c*) Since my escape, I have had several conversations on this subject with an old schoolmaster of the district.

Values.

6 **3.** Use the following in sentences:

(*a*) The first personal pronoun, singular number, objective case.

(*b*) An adverb of manner.

(*c*) "Unlucky" in the comparative degree.

(*d*) "Brother-in-law", plural number.

(*e*) "After" (1) as a conjunction, (2) as a preposition.

(*f*) "That" (1) as a pronoun, (2) as an adjective.

4 **4.** (*a*) What is an auxiliary verb?

(*b*) Give rules for the correct use of "shall" and "will."

6 **5.** Explain and illustrate in a sentence *each* of these terms as applied to verbs: future tense, intransitive, passive voice.

COMPOSITION.

10 **6.** Paragraph, capitalize and punctuate the following passage:

A small boy had been reading treasure island all one february afternoon and had been thrilled by this story of dead mens chests hidden treasure and desperate robbers mother I want to be a treasure hunter he said why dont you become one inquired his mother I havent the time he replied boys in Alberta are busy going to school all the week and there isnt time to hunt treasure on saturday I dont believe that your father would give his consent said his mother anxiously if mr R. L. Stevenson were alive I should write him a sharp letter about his books that make boys want to be pirates she added oh mother I was only pretending he cried thats more fun than being a pirate.

8 **7.** By using in sentences indicate the meaning of each of the following words when (1) the accent is on the first syllable and (2) the accent is on the last syllable: object, conduct, frequent, prefix, absent.

12 **8.** You have accidentally put an ink-blot on the cover of a book which you have borrowed from a former class-mate. Write the letter (twelve or fifteen lines) which ought to accompany the return of the book.

Values.

20 **9.** Write a composition of at *least forty lines* on *one* of the following topics:

(*a*) The Choosing of the Caskets.

(*b*) The Story of the Rings.

(*c*) The work of Dr. Grenfell.

(*d*) The Story of the Memorial Tablet to Moody, Watch and Spy.

(*e*) The Wise Men.

(*f*) The Galleys.

(*g*) Messala, the Enemy of Ben Hur.

(*h*) An incident in the Life of David Livingstone.

(*i*) Zeebrugge.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

LATIN (1).

Time—Two and one-half hours.

Values.

1. Decline in full throughout singular and plural:

4 (*a*) *nox longa;*

4 (*b*) *agricola miser;*

4 (*c*) *res difficilis.*

5 **2.** Give the *ablative singular* and the *genitive plural* of the following nouns:
eques, tempus, passus, ager, mons.

3. Give the comparison of

4 (*a*) the following adjectives: *velox, acer, similis, magnus.*

4 (*b*) the following adverbs: *celeriter, facile, late, diu.*

4 **4.** Give the declension of *ego* in the singular and of *tu* in the plural.

8 **5.** Write the principal parts of the following verbs: *praesum, pono, respondeo, ago, iubeo, cognosco, venio, capio.*

6 **6.** Write the following verb forms:

(*a*) of *servo* the perfect infinitive active;

(*b*) of *prohibeo* the 1st plural future indicative passive;

(*c*) of *peto* the 3d singular imperfect subjunctive active;

[OVER]

Values.

(*d*) of *venio* the 3d plural future indicative active;

(*e*) of *sum* the 2d plural present indicative;

(*f*) of *utor* the 3d singular imperfect indicative.

12 **7.** From what Latin words are the following derived: sequel, imperative, quintette, incredible, legal, itinerary?

Use each of these words in an English sentence in such a way as to show its proper meaning.

8. Translate into English:

2 (*a*) Magna est vis consuetudinis.

2 (*b*) Audiatur et altera pars.

2 (*c*) Nemo me impune lacessit.

2 (*d*) Amicus certus in re incerta cernitur.

2 (*e*) Dulce et decorum est pro patria mori.

4 (*f*) Multae et magnae arbores inter domum et flumen videri possunt.

4 (*g*) Pollicitus est se conaturum urbe potiri prima luce.

4 (*h*) Nihil tam malum est ut peius esse non possit.

4 (*i*) Quaeram a te cur paulo fortius in illo proelio non pugnaveris.

4 (*j*) Veniet ad urbem celeriter ut de periculo fratrem suum certiorem faciat.

9. Translate into Latin:

5 (*a*) My friends asked why I had not remained with my father.

5 (*b*) We hear that an ambassador has been sent to Caesar by the Gauls.

5 (*c*) We shall send back a part of the soldiers late in the day to pitch camp.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

LITERATURE (1).

(GRADE IX)

Time—Two and one-half hours.

Values.

10 **1.** Name the incidents (one from each) of the first four staves of the Christmas Carol which in your opinion had most to do in bringing about the changes in Scrooge. Describe *one* of these incidents.

Or

Recount the incident of the high-hole or golden shafted woodpecker as recorded in Sharp Eyes.

12 **2.** Who was Dominicus Pike? Describe what took place at Parker's Falls. What really happened to Mr. Higginbotham?

Or

"While he lived, did hate all living men, and dying wished a plague might consume all caitiffs left."

Who is described in these words? Where were they found? What circumstances led to their being placed there?

12 **3.** Name the poem or prose story from which *any four* of the following quotations are taken. Give the speaker's name and the connection of each passage with the rest of the story.

(*a*) "Friends, how goes the fight?"

(*b*) "Truth sits upon the lips of dying men."

Values.

(*c*) "Go and buy it, and tell 'em to bring it here, that I may give them the directions where to take it. Come back with the man and I'll give you a shilling."

(*d*) ""Twas mere vanity,
Not love, set that task to humanity."

(*e*) "My generous uncle, when he heard me on the stairs, called me to his bedside, and gave me two dollars and fifty cents to pay my stage fare."

(*f*) "Intreat me not to leave thee,
And to return from following after thee."

(*g*) "I must say something, mustn't I? and if you had all the weight of this undertaking upon your mind, perhaps you'd say the wrong thing too!"

12 **4.** Give the "Spectator's" reasons for "keeping the Sabbath." How does Sir Roger manifest his interest in the church and its services? Name *three* of the offences laid to the charge of Moll White.

Or

Mr. Lloyd George writes that two scenes came to his mind as he attended at the House of Lords to hear the royal assent given to the bill creating the Irish Free State.

Who was the central figure in the first of these scenes? What was remarkable about his appeal on that occasion? Name the outstanding figures in the cause of Irish Freedom in the second scene. What was the later history of each?

12 **5.** What part does the Lisbon lock, with the "janius" in it, play in the story of "The Roll Call of the Reef"?

Or

What means does Hardy take to fasten our interest on the first two strangers who come to Shepherd Fennel's house?

8 **6.** Continue for four or five lines *any four* of the following quotations:

(*a*) "Remember now thy Creator."

(*b*) "This is the chapel: here, my son."

Values.

(*c*) "If you can talk with crowds and keep your virtue."

(*d*) "Cromwell, I charge thee, fling away ambition."

(*e*) "Then felt I like some watcher of the skies."

(*f*) "Oh, little land of England."

(*g*) "There was a sound of revelry by night."

(*h*) "My dazzled sight he oft deceives."

(*i*) "I wandered lonely as a cloud."

12 **7.** (*a*) What was the message brought by the Herald of the Latines? How did the Consuls answer? What precautions were taken?

(*b*) "I will lay on for Tusculum
And lay thou on for Rome."
Name the contestants and describe the duel.

(*c*) What supernatural aid came to the Romans that day?

10 **8.** Name the persons in the Whittier home at the time described in the poem. Give in your own words the poet's characterization of *one* of them.

12 **9.** Who was Rustum? Explain fully how such a combat as that which resulted in the death of Sohrab could come about.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GERMAN (1).

Time—Two and one-half hours.

PART I.

Values.

6 **1.** Decline in full throughout all cases and genders: der; dieser; mein.

6 **2.** Decline in full the following expressions:

(*a*) gute alte Schule.

(*b*) der warme Tag.

(*c*) Jenes schöne Gebäude.

7 **3.** Write out the present and past indicative of the following verbs:

werden; warten; sein; antworten; lassen; tragen; geben.

3 **4.** Compare the following adjectives:

weise; rot; lang; kalt; gut; grosz.

5 **5.** Translate into German:

(*a*) She had become cold.

(*b*) You have fallen.

(*c*) Who has followed you?

(*d*) He will have remained.

(*e*) Where have they gone?

6. Translate into German:

2 (*a*) My brother Fritz goes to school and lives at my sister Anna's.

Values.

3 (*b*) Now it is getting to be summer again, and I am glad that you are feeling better.

2 (*c*) I sent my sister home because your mother had been asking for her.

3 (*d*) If she stays longer in the garden, she will catch cold.

3 (*e*) Goethe was born on the twenty-eighth of August, seventeen hundred and forty-nine and died on March the twenty-second, eighteen hundred and thirty-two.

2 (*f*) By my watch it is a quarter to four; our train leaves for Dresden at fourteen minutes past five.

2 (*g*) If my father comes I shall see him as soon as possible in town today.

2 (*h*) If they are diligent the poorest people are not always the unhappiest.

2 (*i*) When we are in Germany we shall live in a little old house on the Rhine.

2 (*j*) Those books are the works of Schiller; where did they come from?

PART II.

13 **1.** Translate into English:

Der neugierize Affe.

Ein Mann ging hinaus in den Wald um einen dicken Baum zu spalten. Da wurde er durstig und ging an eine Quelle um zu trinken; seine Axt liesz er zurück bei dem Baume. Da kam ein Affe, der von einem Baume zugesehen hatte und wollte auch Holz spalten. Er setzte sich auf den Baum, aber so, dasz sein Schwanz in den Spalt kam. Als er dann die Axt herauszog, klappte der Baum wieder zusammen und hielt ihn so an seinem Schwanze fest. Da schrie er laut vor Schmerzen. Der Mann hörte ihn, kam gelaufen und nahm ihn gefangen. So verlor der Affe durch seine Neugier seine Freiheit.

6 (*a*) Decline in full the following expressions found in the anecdote:

1. den Wald
2. sein Schwanz
3. der Mann.

Values.

2 (*b*) Als er dann—What is the difference in use of: als, wenn, and wann? Illustrate in short German sentences.

2 (*c*) Er setzte sich auf der Baum, aber so, dasz sein Schwanz in den Spalt kam—Explain the different positions of setzte and kam in their respective clauses.

14 **2.** Translate into English:

Die Diebe.

Ein armer Mann wohnte in einer kleinen Hütte. Er hatte nur ein wenig Stroh und zwei Stühle. Das Stroh war sein Bett. Eines Abends war er sehr müde, ging früh zu Bette und schlief bald ein. Um Mitternacht brachen zwei Diebe in die Hütte ein, um etwas zu stehlen. Die Nacht war sehr dunkel und sie hatten kein Licht. Daher waren sie gezwungen mit den Händen auf dem Boden und an den Wänden zu suchen, um etwas zu finden. Einer von ihnen warf einen Stuhl um und das Geräusch weckte den armen Mann. Da hörte er die Diebe und sagte: "Ihr seid grosze Thoren. Ihr hofft in der Nacht hier etwas zu finden und ich finde am Tage nichts."

5 (*a*) Respecting the following verbs found in the extract, write out in full the tense indicated:

wohnte	present indicative.
hatte	perfect indicative.
war	future indicative.
suchen	past indicative.
weckte	conditional.

5 (*b*) Write the genitive singular and nominative plural of the following words occurring in the anecdote:

er; Bette; nacht; Händen; Tage.

3 (*c*) "Ihr seid grosze Thoren—" Explain the different senses of du, ihr and Sie when used as pronouns of address.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

FRENCH (1).

Time—Two and one-half hours.

PART I.

Values.

5 **1.** Form the feminine of the following adjectives:

petit; grand; facile; heureux; blanc; cruel; sec; ancien; cher; beau.

5 **2.** Write the French for:

(*a*) some ink; some meat.

(*b*) 1. We have good friends.

2. She has no chalk.

3. They haven't any apples.

3 **3.** Translate into French:

(*a*) My uncle has a lot of money.

(*b*) His sister has enough dresses.

(*c*) The teacher has no more pupils.

3 **4.** Write the plural of:

le roi; le grand roi; sa plume; mon autre plume; le nez; la bonne voix.

6 **5.** Translate into French:

I am cold; we see them; he is sleepy; you are right; how are you?; he is giving it to me.

5 **6.** Write out in full the present indicative and past definite of the following verbs:

être; faire; vouloir; dire; écrire.

Values.

7. Translate into French:

2 (1) I have meat, vegetables, and bread and butter on my plate.

2 (2) Did he want any hot water? No, there was enough of it in the room.

2 (3) At what time do you go to bed? I go to bed at ten o'clock.

2 (4) The little girls are playing in the street and are having a very good time.

3 (5) How long have you been in the city? We have been here for three weeks.

2 (6) The peach is the best of all fruits, but it is not so useful as the apple.

3 (7) The potatoes which we have bought are now in the kitchen.

2 (8) Our father and mother have gone out, but we have remained at home.

2 (9) I gave it to him, but he has lost it.

3 (10) How many times a day do you wash your hands? I wash them three times at least.

PART II.

12 **1.** Translate into English.

Le plus brillant des rois de France fut certainement Louis XIV. Mais environ quatre-vingts ans après sa mort, le peuple révolté remplaça la royauté par une république, qui dura jusqu'en 1804. Alors Napoléon Bonaparte la changea en un empire dont il fut le chef. Il fut en guerre contre toute l'Europe, et aucun pays n'échappa à sa domination, excepté l'Angleterre. Mais finalement, en 1815, il fut chassé par tous les états de l'Europe alliés contre lui, et l'ancienne royauté fut rétablie.

En 1830 une révolution changea le roi, et en 1848 la république fut de nouveau instituée. Peu de temps après, Napoléon III, le neveu de Napoléon Bonaparte, rétablissait l'empire, et celui-ci dura jusqu'en 1870. En cette année-là, la guerre entre la France et l'Allemagne amena une nouvelle révolution, et la troisième république fut établie. Elle dure encore de nos jours.

4 (*a*) fut; échappa; rétablissait; dure—write out in full the tense of which each of the foregoing verbs (all regular except "fut") is a part.

5 (*b*) XIV; 1804; 1815; 1830; 1870;—write these numerals out in words.

Values.

4 (*c*) troisième—write out the cardinal numerals up to twelve.

1 (*d*) Write the masculine of: ancienne, nouvelle.

12 **2.** Translate into English:

Couverts d'énormes fourrures dans lesquelles disparaissent presque leurs visages, les yeux cachés derrière d'effrayantes lunettes, les automobilistes ressemblent parfois à des sortes d'animaux fantastiques bien propres à vous effrayer.

L'autre jour, dans la rue était arrêté un automobile, avec sur le siège une dame et un monsieur ainsi habillés. Le moteur sous pression grondait sourdement. En sens inverse arrive une voiture attelée de deux chevaux fringants qui à la vue de la machine se mettent à se cabrer d'une façon inquiétante. Le laquais descend du siège pour tâcher de les calmer. Alors l'automobiliste, obligeamment:

"Peut-être le bruit les effraye; faut-il arrêter le moteur?"

"Pas cela, répond le cocher; mais cachez-vous une minute derrière l'automobile; cela suffira!"

6 (*a*) Write out in full the present indicative; the conditional, and the past definite of the following verb occurring in the extract:
se mettre.

6 (*b*) Write out in full the imperfect indicative; the future, and the present subjunctive of the following verb found in the extract:
arrêter.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

ALGEBRA (2).

(GRADE X)

Time—Two and one-half hours.

Values.

6 **1.** Simplify $\frac{x+y}{y}+\frac{2x}{x+y}-\frac{xy^2+y^3}{x^2y-y^3}$

7 **2.** Reduce to its lowest terms:

$$\frac{16x^4+4x^2y^2+y^4}{x^3-x^2-2x}\times\frac{x^2-4}{4x^2-2xy+y^2}$$

8 **3.** The volume of a frustum of a cone is given by the formula

$$V=\frac{h}{3}\left\{A+a+\sqrt{Aa}\right\}$$

where 'h' is the height of the frustum, 'A' the area of the base and 'a' the area of the smaller end. Find the volume of a frustum in which the height is 16 inches, the radius of the base is 6 inches and the radius of the smaller end is 4 inches.

6 **4.** Solve for x and y: $x+2y=9$

$$3y^2-5x^2=43$$

2 Verify.

6 **5.** Prove that $a^m \div a^n = a^{m-n}$.

7 **6.** Divide $x^{\frac{5}{4}}+4x-11\sqrt{x}-6x^{\frac{1}{4}}$ by $x^{\frac{1}{4}}-1-x^{-\frac{1}{4}}$.

8 **7.** Solve for x in $\sqrt{4+x}+\sqrt{6-x}=\sqrt{6+2x}$.

[OVER]

Values.

6 **8.** By how much is $(\sqrt{10}+\sqrt{7})^2$ greater than $(\sqrt{22}-\sqrt{5})^2$?

7 **9.** Solve by completing the square $x^2+px+q=0$.

5 **10.** Find by substitution in the general formula the roots of $5x^2-6x-3=0$.

10 **11.** The sum of the sides about the right angle of a right-angled triangle is 35 inches and the hypotenuse is 25 inches. Find the sides of the triangle?

11 **12.** The paving of a square court costs 40c per square yard and the fence around it costs \$1.50 per linear yard. If the total cost of the pavement and the fence is \$100, what is the size of the court?

11 **13.** Draw the graphs of $x^2+y^2=100$ and $2x+3y=12$.

Read the approximate values of the roots when the equations are treated as simultaneous.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

HISTORY (2).

(GRADE X)

Time—Two and one-half hours.

NOTE TO CANDIDATES: Candidates will answer seven questions only, two to be selected from Section A, two from Section B, and three from Section C—one of which must be Question 10.

SECTION A.

Values.

16 **1.** Show clearly the problems of government which confronted Henry VII. To what extent and in what ways did he solve them?

2. "The rest of Mary's reign is the story of her attempt to bring England back to the Roman Catholic obedience."—Mowat.

Give an account of the religious struggle of the time under the headings:

5 (*a*) The Protestant changes under Edward VI.

6 (*b*) The Marian reaction against these changes.

5 (*c*) The Elizabethan church settlement.

16 **3.** Outline the course of the Great Rebellion (1642-1649) stressing the decisive events and making clear the reasons for the victory of Parliament and the defeat of the King.

SECTION B.

4. "In the three years of his reign [James II's] two distinct designs can be traced: one to rule as an absolute monarch, the other to re-establish the Roman Catholic Church in England."—Mowat.

[OVER]

Values.

9 (*a*) What measures did James take in the endeavor to execute these two designs?

7 (*b*) What were the main results of the Revolution which followed?

16 **5.** "Yet, though continually criticized, he [Walpole] was kept in office by his country for twenty years." Mowat.

Discuss the policies of Sir Robert Walpole, estimating his services to England.

6. What part was played by sea-power—

7 (*a*) In the Seven Years' War,

9 (*b*) In the war against Revolutionary France and Napoleon?

SECTION C.

7. "The five years which followed the Act of 1832 were not barren of results."—Mowat.

7 (*a*) In what ways did the Reform Act of 1832 amend the English system of government?

9 (*b*) Outline the work of the First Reformed Parliament.

5 **8.** (*a*) What were the Corn Laws and their effects?

4 (*b*) Describe the "sliding scale" and its operation.

7 (*c*) Give an account of the movement which led to the establishment of Free Trade.

16 **9.** "Gladstone approached the central point of the Irish problem by successive stages: the first stage was the church, the second the land, the third was Home Rule."—Mowat.

Discuss Gladstone's Irish policy under the three headings thus suggested.

10. Write a note on *one* of the following:

4 (*a*) The Petition of Right.

4 (*b*) Wilkes.

4 (*c*) Peterloo and the "Six Acts."

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

AGRICULTURE (1).

(GRADE X)

Time—Two and one-half hours.

Values.

4 **1.** (*a*) Name *four* precautionary measures that may be used to maintain the fertility of the soil.

4 (*b*) Explain the differences in the crop-producing qualities of soil and sub-soil.

4 (*c*) Describe *two* functions of humus as a constituent of normal soils.

2 **2.** (*a*) What is capillary soil water?

4 (*b*) What *two* important functions has it as it occurs in the soil?

2 (*c*) In what *two* ways may it be conserved?

3. Describe an experimental method to show—

3 (*a*) the acidity of a sour soil.

3 (*b*) that heat weathers rock.

3 (*c*) that free water has a leaching effect on soil.

4 **4.** (*a*) Describe a simple process for pasteurizing milk, indicating the range of temperatures required.

3 (*b*) Why is pasteurization used instead of scalding when handling milk commercially?

3 (*c*) Name *three* conditions favorable to the development of nitrifying bacteria.

2 **5.** (*a*) Name *one contact* insecticide and *one stomach* insecticide.

2 (*b*) From the standpoint of the method of securing food, what difference in the form of the mouth-parts distinguishes bugs from other common insects?

[OVER]

Values.

5 **6.** (*a*) Describe in detail the life history of a cabbage butterfly *or* the grasshopper.

4 (*b*) Describe in detail the control of the insect described in (*a*).

3 **7.** (*a*) Name two kinds of clover. Give *one* characteristic *each* of root, leaf and flower that help to identify the special clover you name.

6 (*b*) Describe the appearance, the life history and the control of either—

The stinking smut (bunt) of wheat

or

The late blight of potatoes.

8. Give reasons for the following practices:

3 (*a*) To obtain a supply of currant bushes, cuttings from plants of the desired variety are used instead of seeds from the fruits.

3 (*b*) Cabbages are transplanted from the hotbed to boxes, instead of directly to the garden.

3 (*c*) Straw or leaves are placed over some perennials that are to remain out during the winter.

6 **9.** (*a*) Write an account of the functions of the leaf.

6 (*b*) What special function is served in *each* of the following: the flesh in the raspberry, the odor in the flower of the rose, the excess of pollen in the flowers of grain?

4 **10.** (*a*) Describe a test to show the presence of starch in the leaf of a geranium.

4 (*b*) Describe an experiment to illustrate the principle underlying the absorption of food substance by the root-hairs.

3 (*c*) Account for the fact that wheat straw cut before it is ripe makes good fodder, while the straw from ripened wheat is low in food value.

4 **11.** (*a*) Describe an experiment to show the moisture capacity of a sample of soil.

3 (*b*) Describe an experiment to show *one* effect of lime on clay soil.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

ART (1).

(GRADE X)

NOTES 1. *Three questions* make a full paper. *One* of these must be question 6.

2. Use foolscap for questions 2 and 6 and a separate sheet of drawing paper for each of the other two questions.

Time—Two and one-half hours.

Values.

35 **1.** Make a drawing of a cup, saucer and a pitcher placed slightly below the level of the eye, and grouped in the most pleasing way you can think of. Sketch these carefully and apply washes of different values of gray or color to the drawing. Make the drawing as large as the page will allow.

Or

Draw the interior corner of a room in which a door is shown partly open. Finish in pen and ink.

35 **2.** Name the main principles of design which are found in most good designs. Explain carefully what these principles are and make sketches to illustrate your answer.

35 **3.** Draw a circle as big as the paper will allow. Make a floral design within this circle that would be suitable for a dinner plate. Do your drawing carefully and color half of it to show your color scheme.

Or

Draw a 6″ square and plan a design that will be suitable for a tea-pot stand. Base your design on a geometric pattern and color part of it in a split-complementary color scheme.

[OVER]

Values.

35 **4.** Make a plan that will conveniently fill the paper showing how you would lay out the grounds (88 yds. x 110 yds.) around a house. Indicate the position of the house by a small rectangle and show the walks, trees, bushes, flower beds and any other features you consider necessary in well designed grounds.

35 **5.** Letter the following quotation in pen and ink. Outline neatly in pencil, spacing your letters and words carefully. Ink in as much of the quotation as possible. Include an initial letter.

"Whichever way the wind doth blow
Some heart is glad to have it so;
Then blow it east, or blow it west,
That wind that blows, that wind is best."

30 **6.** (*a*) What do you understand by the idealized type of picture? In illustrating your answer you may refer to any one or all of the following pictures: Sistine Madonna, The Sower, and The Song of the Lark. Name the painter of each of the above pictures.

(*b*) The Dance of the Nymphs belongs to the landscape group. Who painted this picture? What are the main characteristics of this picture?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

COMPOSITION (1).

(GRADE IX)

Time—Three hours.

N.B.—Candidates should endeavor to submit papers which show neatness in form, freedom from mechanical errors and care in expression. Candidates should spend any extra time in reviewing, revising and rewriting answers in order to secure these qualities.

Values.

4 **1.** (*a*) Write in full the meanings of the following: F.O.B.; mdse.; via; Ph.D.; viz.; e.g.; C.E.; H.M.S.

8 (*b*) Insert the necessary punctuation marks and capital letters in each of the following sentences:

(1) The third book of the bible and the one with which I am least familiar is leviticus.

(2) He has no shirt to his back no shoes to his feet and no roof over his head he is like the birds in the air which have none of these things.

(3) With an air of amazement she inquired but how did he happen to know the treasure was there.

(4) His son Rip an urchin begotten in his own likeness promised to inherit the habits with the old clothes of his father.

(5) Kitchener if it be fair to make a comparison was it seems to me greater than Roberts.

(6) The old proverb goes as follows one good turn deserves another.

(7) To think is good to think and reflect is better to think reflect and then act is best.

Values.

(8) Poor Wolf he would say thy mistress leads thee a dogs life of it but never mind my lad whilst I live thou shalt never want a friend to stand by thee!

12 **2.** (*a*) Give a detailed analysis of the following sentences; that is to say, divide each clause into bare subject, modifiers of bare subject, bare predicate, etc. Your analysis should show the relation of all subordinate clauses.

(1) Soon o'er the yellow fields, in silent and mournful procession,
Came from the neighboring hamlets and farms the Acadian women,
Driving in ponderous wains their household goods to the seashore.

(2) When the bustle occasioned by this incident was somewhat composed, the chief outlaw took from his neck the rich horn which he had gained at the strife of archery.

4 (*b*) Give the principal parts of the following verbs: Loose, rise, draw, fly, lead, set, lay, burst.

4 (*c*) Construct phrases showing the following words used in both the possessive singular and possessive plural forms:

Woman, horse, lady, hero, I, Canadian, father-in-law, it.

8 **3.** Name the *four* kinds of prose composition and distinguish between them.

1 **4.** (*a*) What is meant by the term "topic sentence"?

2 (*b*) What are its main uses in the paragraph?

2 (*c*) Where is it generally placed in a paragraph and why is it given this position?

15 (*d*) Expand any *one* of the following topic sentences into a paragraph of at least fifteen lines:

(1) I must relate an incident which happened while I was coming to school this morning.

(2) Presently there was a jerk on my line and I knew instinctively that I had hooked a big trout.

(3) We were going along at a rate of twenty miles an hour when suddenly our steering gear came loose.

(4) Without warning my horse took fright at a harmless piece of paper and dashed up the street completely out of my control.

Values.

(5) We were sitting quietly in the drawing room when a loud, impatient rap came at the back door.

40 **5.** Write a narrative composition of about two pages on any *one* of the following subjects taken from your supplementary reading:

(*a*) Perseus Brings Home the Gorgon's Head.

(*b*) The Return of Enoch Arden.

(*c*) Midas Grows Tired of the Golden Touch.

(*d*) Dour Davie's Drive.

(*e*) Pandora Opens the Box.

(*f*) Pontiac Fails to Capture Detroit.

(*g*) Hercules Takes the Sky on his Shoulders.

(*h*) Sissy Bembridge's Escape from the Bear.

(*i*) Iberville Captures the Forts at Hudson's Bay.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GEOMETRY (2).

(GRADE X)

Time—Two and one-half hours.

Values.

5 **1.** (*a*) If chords of a circle are equal to one another, their distances from the centre are equal.

2 (*b*) State the converse.

6 (*c*) In a given circle draw a chord of given length, not greater than the diameter, so that its centre may be on a given chord.

8 **2.** (*a*) The vertices of all equal angles, standing on the same base and on the same side of it, lie on a segment of a circle passing through the extremities of the base. IV-6 Converse.

5 (*b*) [illegible] is any point on the arc of a segment whose chord is AB. Show that the sum of the angles CAB, CBA is constant.

6 (*c*) If two straight lines AEB, CED, in a circle, intersect at E, show that the angles subtended by AC and BD at the centre are together double the angle AEC.

7 **3.** If two circles touch, the straight line joining their centres, produced if necessary, passes through the point of contact. IV-11.

7 **4.** (*a*) In a given circle to inscribe a triangle equiangular to a given triangle. IV-16.

6 (*b*) Two circles touch internally at A. Through A two straight lines ABC and ADE are drawn cutting the smaller circle at B and D and the larger circle at C and E. Prove that BD is parallel to CE.

[OVER]

Values.

2 **5.** (*a*) Define the term: similar rectilineal figures.

8 (*b*) If the ratios of the three sides of one triangle to the three sides of another triangle, taken in order, be equal, the triangles will be equiangular. III-6.

6 (*c*) ABC is a triangle having the angle B double the angle C, and the bisector of angle B meets AC in D. Show that the triangles ABC and ADB are similar, and that AB is a mean proportional between AC and AD.

6 (*d*) If AB is 8 inches long and AC 15 inches long, find the length of BD. Compare the areas of triangles ABC and ADB.

8 **6.** (*a*) In a right-angled triangle, the square on the hypotenuse is equal to the sum of the squares on the other two sides. III-13.

4 (*b*) Find a line the square on which is equal to the sum of the squares on two given straight lines.

6 (*c*) Construct a square equal to the difference of two given squares.

8 **7.** If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circum-circle. Add. 19.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

PHYSICS (1).

(GRADE X)

Time—Two and one-half hours.

Values.

4 **1.** (*a*) Name *four* ways of producing heat.

3 (*b*) Give a practical example each of an application made of expansion due to heat in (1) a solid, (2) a liquid, (3) a gas.

2 **2.** (*a*) Distinguish the terms, quantity of heat and temperature.

7 (*b*) Describe a method of making a thermometer and placing an accurate scale on it.

3 (*c*) Change 40°C to a Fahrenheit reading and 0°F to a centigrade reading, and *either* one to a reading on the absolute scale.

6 **3.** (*a*) If 95 grams of a metal are heated to 100°C and then placed in 114 grams of water at 7°C the resulting temperature is 15°C. Find the specific heat of the metal.

6 (*b*) If 34.7 grams of steam at 100°C are conveyed into 500 grams of water at 20°C the resulting temperature is 60°C. Find the heat of vaporization of water

4 **4.** (*a*) Describe an experiment that shows the effect of pressure upon the boiling point of a liquid.

2 (*b*) Name *two* distinct practical applications made of this effect.

3 (*c*) Explain why a hand dampened with water and placed upon an iron bar when the temperature

[OVER]

Values.

is many degrees below zero, freezes immediately to the bar, while if it were placed upon a wooden rod under the same conditions it would simply feel the rod to be cold.

5 **5.** (*a*) Draw a diagram to show and explain the movement of molecules of a body conducting sound.

5 (*b*) Describe an experiment to determine the rate with which sound travels through the atmosphere.

3 **6.** (*a*) Upon what *three* factors does the loudness with which a sound may be heard depend?

2 (*b*) What is a musical tone as distinguished from a noise?

4 (*c*) What determines—

(1) the pitch of a note,

(2) the quality of a sound?

4 **7.** (*a*) Draw a diagram to illustrate the shadows that are cast by the earth during an eclipse of the moon.

4 (*b*) A candle is placed 2 feet from the grease spot in a Bunsen photometer and an electric lamp is placed 8 feet on the opposite side when the grease spot disappears. Calculate the candle-power of the electric lamp.

2 **8.** (*a*) Explain why when a person stands before a plain mirror and raises his right hand, his image in the mirror appears to raise the left hand

2 (*b*) Give *two* practical examples of the use made of the concave mirror.

4 (*c*) Give a clear example of the total reflection of light, and explain why it is called total reflection as distinguished from the reflection from a plain mirror.

4 (*d*) Show how to produce the seven colors of which white light is composed.

3 **9.** (*a*) Explain how you might magnetize your knife blade so as to make the point a North pole.

4 (*b*) State *two* facts to show that the earth is magnetic.

6 (*c*) Describe how to make a simple electric battery, explaining how to overcome polarization and local action.

4 **10.** (*a*) Describe an experiment to show one chemical effect of the electric current.

4 (*b*) Explain how the electric current passing through insulated wire wound round a soft iron core makes a magnet of the iron.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

LATIN (GRADE XI)

OR

LATIN (2).

Time—Three hours.

SECTION A (AUTHORS).

Values.

8 **1.** Translate into English:

Hic etsi crimine Pario est accusatus, tamen alia causa fuit damnationis. Namque Athenienses propter Pisistrati tyrannidem quae paucis ante annis fuerat, omnium civium suorum potentiam extimescebant. Miltiades, multum in imperiis magistratibusque versatus, non videbatur posse esse privatus, praesertim cum consuetudine ad imperi cupiditatem trahi videretur. Nam Chersonesi omnes illos quos habitarat annos perpetuam obtinuerat dominationem tyrannusque fuerat appellatus, sed iustus.

1 (*a*) Pario crimine.——What was this?

1 (*b*) What was the greatest achievement of Miltiades, and how was it rewarded?

8 **2.** Translate into English:

Hic uxorem numquam duxit. In quo cum reprehenderetur, quod liberos non relinqueret, a Pelopida qui filium habebat infamem, maleque eum in eo patriae consulere diceret, "Vide," inquit, "ne tu peius consulas qui talem ex te natum relicturus sis. Neque vero stirps potest mihi deesse; namque ex me natam relinquo pugnam Leuctricam, quae non modo mihi superstes, sed etiam immortalis sit necesse est."

1 (*a*) pugna Leuctrica.——What did Epaminondas accomplish by this?

1 (*b*) What is the final proof given by Nepos of the greatness of Epaminondas?

Values.

8 **3.** Translate into English:

Iudicium sanctique placet sententia montis
omnibus; arguitur tamen atque iniusta vocatur
unius sermone Midae. Nec Delius aures
humanam stolidas patitur retinere figuram,
sed trahit in spatium villisque albentibus implet
instabilesque imas facit et dat posse moveri.
Cetera sunt hominis; partem demnatur in unam,
induiturque aures lente gradientis aselli.

1 (*a*) Sancti montis.—To what is the reference?

1 (*b*) Delius.—To whom is this epithet applied and why?

8 **4.** Translate into English:

Fecerat exiguas iam sol altissimus umbras;
quae mora sit sociis miratur Agenore natus
vestigatque viros. Tegumen direpta leonis
pellis erat, telum splendenti lancea ferro
et iaculum, teloque animus praestantior omni.
Ut nemus intravit letataque corpora vidit
victoremque supra spatiosi corporis hostem
tristia sanguinea lambentem volnera lingua,
"Aut ultor vestrae, fidissima corpora, mortis
aut comes" inquit, "ero."

1 (*a*) Agenore natus.—What is his name?

1 (*b*) Explain how the first line of this passage describes the exact time of the action.

10 **5.** Translate into English at sight:

THE RELATIONS OF PELOPIDAS AND EPAMINONDAS

Hoc tam turbido tempore, sicut supra docuimus, Epaminondas, quoad cum civibus dimicatum est, domi quietus fuit. Itaque haec liberatarum Thebarum propria laus est Pelopidae, ceterae fere communes cum Epaminonda. Namque in Leuctrica pugna imperatore Epaminonda hic fuit dux delectae manus quae prima phalangem prostravit Laconem. Denique Pelopidas fuit secunda persona Thebis, sed tamen secunda ita ut proxima esset Epaminondae.

Quoad—so long as. proprius—special, particular. prosterno—overcome. Laco—Spartan. denique—in short.

SECTION B (GRAMMAR AND COMPOSITION)

Values.

1. Decline in combination through both numbers:

3 (*a*) *haec manus delecta;*

2 (*b*) *idem tempus.*

3 **2.** Write the *genitive singular* of *crimen* and *voluntas,* the *ablative singular* of *caput* and *mare,* and the *genitive plural* of *casus* and *civis.*

5 **3.** Give the genitive singular of *quis*
the accusative singular of *aliquis*
the genitive plural feminine of *qui, quae, quod*
the genitive plural of *ego*
the dative singular of *quisquam.*

6 **4.** Give the other degrees of comparison for—
(*a*) *utilior, magnus, acerrimus;*
(*b*) *facillime, maxime, diutius.*

5 **5.** Give the principal parts of the verbs from which are derived the following forms:
trahi, coniectus est, discessisset, coegit, adiuverant.

5 **6.** Write a brief example in Latin to illustrate each of the following points of syntax:
(*a*) the Ablative Absolute;
(*b*) the Ablative of Agent;
(*c*) the Indirect Question;
(*d*) Indirect Narration;
(*e*) the Objective Genitive.

7. Translate into Latin:

6 (*a*) A few years before; by some chance or other; as soon as possible; at the third watch; on the top of the mountain; enough men.

5 (*b*) The danger from (*ex*) the cavalry of the enemy was so great that no one dared (*audeo*) to leave the town.

5 (*c*) I shall read more slowly (*lente*) in order that you may all understand what the story is saying.

5 (*d*) He answered that he would make peace if they surrendered (*dedo*) to him the chiefs of the rebellion (*defectus,* 4).

50

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

COMPOSITION (2).

(GRADE X)

Time—Three hours.

N.B.—Candidates should endeavor to submit papers which show neatness in form, freedom from mechanical errors and care in expression. Candidates should spend any extra time in reviewing, revising and rewriting answers in order to secure these qualities.

Values.

2 **1.** (*a*) Explain clearly what is meant by "unity" in a sentence.

3 (*b*) Give *three* causes which lead to the lack of unity in sentences.

(*c*) Combine the sentences of each of the following groups into a single well-knit sentence possessing the quality of "unity."

(1) The road was level and easy. We bowled along smoothly through the valley of the Mohawk. We drove under drooping birch trees and through green fields.

(2) The surging sea beat upon the beach. Along the margin of the beach were small rocks. The rocks were covered with seaweed. The seaweed was of a peculiar variety.

(3) I am most uneasy. The red bird is forced to leave the covert of the cedars. He is hungry. He hunts on the snow for food. The white snow shows him too clearly. It makes him a challenge for his enemies.

(4) Among the evergreen branches overhead were gaily dressed warblers. They are the dandies of the forest. They were flitting to and fro. They were lisping their June songs of contented love. The notes were

Values.

milder, slower, lazier than those in which they voiced the raptures of May.

10 **2.** Explain the nature of the defects in *each* of the following sentences. Rewrite *each* sentence correctly.

(1) It is generally believed that neither his wife or his son know where he is.

(2) He is a bee-keeper who is well-known and he has lately acquired several large swarms of them.

(3) He who was once my friend I will not quickly turn against.

(4) The host could easily see that everybody in the crowd were ready for their breakfast.

(5) I attended college only two months when I was forced to withdraw to help my father.

(6) He will probably delay so long discussing that matter at the meeting that I will miss the train.

(7) Naturalization is where a foreigner becomes a citizen of the country in which he intends to make his future home.

15 **3.** (In answering this question candidates are *not* to use their own names or addresses.)

You have just graduated from High School and wish to learn the wholesale dry goods business. You have decided to apply for a position as clerk with the A. M. Smith Co. of Calgary. Write a courteous and tactful letter to some person of influence asking for a recommendation.

Or

You have received a letter of inquiry from Jones & Brown, Barristers, Solicitors, etc. of Regina, Saskatchewan, asking about Miss Miriam Greene, your former stenographer. Write your reply, recommending her highly for a similar position with that firm.

2 **4.** (*a*) What is the distinction between scientific and artistic description?

16 (*b*) Expand any *one* of the following topical sentences into a descriptive paragraph of the latter type, at least fifteen lines in length:

(1) As he came slowly around the bend of the river, his future home appeared suddenly in view.

Values.

(2) Before putting away the suit for the winter, his mother thought it best to examine the pockets.

(3) The old horse looked as if he belonged to no one.

(4) Towards daybreak the storm assumed the proportions of a regular blizzard.

(5) He was a tramp dog, but an unusual tramp dog, I would have you understand.

40 **5.** Write a composition of about two pages taking as your theme any *one* of the following subjects from your supplementary reading:

(*a*) The Taking of Quebec.

(*b*) La Jongleuse.

(*c*) Through the Bars of his Cage (The Story of Moray's Escape from Jail).

(*d*) Gabord.

(*e*) Alixe Duvarney.

(*f*) The Winning of Guinevere.

(*g*) King Richard and the Marabout.

(*h*) The Crusades.

(*i*) The Trial by Combat.

(*j*) The Character of King Richard.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

LITERATURE (2).

(GRADE X)

Time—Two and one-half hours.

Values.

12 **1.** Show by reference to his acts in the Lay the part played by the Goblin page in advancing the story.

Or

"But no kind influence deign they shower
On Teviot's tide, and Branksome's Tower,
Till pride be quelled, and love be free."

The plot of the poem is contained in these lines. Explain what it was and show how the solution was finally worked out.

12 **2.** Describe: (*a*) How the Scotts obtained Eskdale.

(*b*) The theft of the "Mighty Book."

Or

Give an account of the life of the "Minstrel" previous to his visit to Branksome.

What provision was made for his latter days?

12 **3.** Few people, who have seen the play (The Merchant of Venice) acted, come away without a feeling of pity for Shylock.

What is it that excites this pity?

What are the two outstanding features of his character? Support your answer by reference to specific incidents, quoting where you can.

Or

Values.

Recall the incidents with which Jessica is connected and show how these are related to the general structure of the Play.

12 **4.** "The dearest friend to me, the kindest man,
The best-condition'd and unwearied spirit
In doing courtesies, and one in whom
The ancient Roman honour more appears
Than any that draws breath in Italy."

Who is thus described? Do you agree with this characterization, or do you consider the picture overdrawn? Refer to specific situations in the Play.

Or

Name six of the suitors as Nerissa "over-named" them. and give their characteristics. Point out how Shakespeare has given a national characteristic to each.

10 **5.** A writer of Shakespeare's time condemns the stage, but excepts one play "representing the greedinesse of worldly chusers and bloody mindes of usurers."

(*a*) What reasons are there for thinking that he had our play in mind?

(*b*) For what reasons would the writer except this play?

8 **6.** Complete any *four* of the following quotations:

(*a*) "O Caledonia! stern and wild"—(6 lines additional).

(*b*) "There's not the smallest orb which thou beholdest"—(5 lines additional).

(*c*) "If thou would'st view fair Melrose aright"—(5 lines additional).

(*d*) "A Palmer's amice wrapp'd him round"—(5 lines additional).

(*e*) "To bait fish withal, if it will feed nothing else"—(5 lines additional).

(*f*) "Old times were changed, old manners gone;"—(5 lines additional).

"Mark you this, Bassanio,
(*g*) The devil can cite Scripture for his purpose"—(4 lines additional).

(*h*) "The man that hath no music in himself"—(5 lines additional).

Values.

10 **7.** Name the speaker and give the circumstances under which *any five* of the following quotations are spoken:

(*a*) "Yet rest thee, God! for well I know
I ne'er shall find a nobler foe."

(*b*) "My clerk hath some good comforts too for you."

(*c*) "Despite thy arrows, and thy bow,
I'll have thee hang'd to feed the crow."

(*d*) "Unless Bellario, a learned doctor,
Come here today."

(*e*) "Man of age, thou smitest sore!"

(*f*) "Fast bind, fast find,
A proverb never stale in thrifty mind."

(*g*) "Say to your Lords of high emprize,
Who war on women and on boys."

(*h*) "For Paynim countries I have trod
And fought beneath the Cross of God."

(*i*) "I gave it to a youth,
A kind of boy, a little scrubbed boy."

12 **8.** "There is not a grander, lovelier figure than the self-wrecked, self-devoted.....in literature or history."

Of what character in "The Tale of Two Cities" were the above words written?

Relate incidents from his life which justify the adjectives—"self-wrecked" and "self-devoted".

Or

What characters in this story supply the element of humor?

Describe two scenes in which it is apparent.

12 **9.** (*a*) What were Charles Darnay's reasons for returning to France after the outbreak of the Revolution?

(*b*) Explain how his release from "La Force" was effected the first time.

(*c*) Why did Madame Defarge pursue him so relentlessly?

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

FRENCH (GRADE XI)

OR

FRENCH (2).

Time—Three hours.

PART I.

GRAMMAR AND COMPOSITION.

Values.

5 **1.** Explain with illustrative sentences the usual method of comparing adjectives in French.

10 **2.** Translate into French:

(*a*) Some bread and meat.

(*b*) I have not any money.

(*c*) She has gone away.

(*d*) What do you say?

(*e*) How warm it is!

(*f*) Are you sleepy?

(*g*) Something good.

(*h*) She has not seen anything.

(*i*) My best books.

(*j*) Whose hat is that?

3. Translate into French:

2 (*a*) When do you go to bed? Oh, usually about half-past ten, but sometimes later than that.

3 (*b*) He wished you had come sooner. It is very cold now, but the weather was beautiful.

3 (*c*) The city of Quebec was founded by Champlain in sixteen hundred and eight. Champlain died on Christmas Day sixteen hundred and thirty-two.

Values.

2 (*d*) Here you are at last! Where have you come from and what have you been doing?

3 (*e*) How long have you been in Alberta? We have been living here for fifteen years.

3 (*f*) I have never seen so many people anywhere; the streets are full.

2 (*g*) The books we have bought have all been burned.

3 (*h*) My father is an officer, my uncle is a priest and my brother intends to be a merchant.

2 (*i*) The man whose watch I found is my cousin's oldest friend.

2 (*j*) What you say is true, but it makes no difference.

10 **4.** Every Canadian should speak both English and French, for Canada is made up of two great races and each of these is rightly proud of the noble language and literature which has come down to it from the past. In Canada the cultures (culture, f.) of the two greatest nations in the world unite and it is your duty and mine to profit by this wonderful inheritance (héritage, m.).

PART II.

AUTHORS AND SIGHT TRANSLATION.

10 **1.** *Translate into English:*

Madame Malingear.—J'ai eu tort.....La première fois que cette dame nous fera visite, je rétablirai les choses dans leur vraie situation....."Madame, je vous présente M. le docteur Malingear, un fruit sec de la Faculté.....Il ne soigne que des cochers gratis! .....Mademoiselle Malingear.....elle sait lire, écrire, compter. Madame Malingear.....qui fait ses robes elle-même et raccommode avec tendresse les habits de son mari....."

Malingear.—Il est inutile d'entrer dans ces détails, et plus inutile encore d'entasser tous ces mensonges .....Veux-tu que je te le dise, c'est de l'orgueil, c'est de la vanité.....Tu veux jeter de la poudre aux yeux!

Madame Malingear.—C'est vrai.....j'en conviens.

Malingear.—Ah!

Madame Malingear.—Mais, en cela, je ne fais que suivre l'exemple de mes contemporains.....Chacun passe sa vie à jeter de petites pincées de poudre dans l'oeil de son voisin.....Pourquoi fait-on de la toilette? pourquoi a-t-on des diamants, des voitures, des livrées? Pour les yeux des autres!

Values.

Malingear.—Allons donc!

Madame Malingear.—Mais, toi-même.....sans t'en douter.....tu obéis à l'entraînement général.

5 (*a*) Write out the principal parts of the following verbs occurring in the extract: sait; lire; écrire; veux; conviens.

(*b*) *Translate into French:*

1 1. Pay me a visit.

2 2. I have never suspected it.

2 3. Please introduce me to the doctor.

10 **2.** *Translate into English:*

Malingear.—Les renseignements que nous avons dû prendre, tant sur monsieur votre fils que sur la famille à laquelle il a l'honneur d'appartenir.....ces renseignements qui n'avaient et ne pouvaient avoir aucun caractère inquisitorial, soyez-en persuadés.....ces renseignements, dis-je, nous ont amenés à penser qu'il y avait lieu de prendre en considération sérieuse..... les ouvertures flatteuses que vous avez bien voulu nous faire. (Il se rassied.)

Ratinois (se levant, et très ému).—Docteur, je crois être le fidèle interprète des sentiments de madame Ratinois.....et des miens propres.....et le ceux de mon fils Frédéric.....avocat.....en vous disant, avec une émotion.....que vous comprendrez .....car c'est celle d'un père.....et vous êtres mère, madame.....en vous disant: Docteur, recevez en ce jour les bénédictions.....et la gratitude affectueuse d'une famille.....qui.....que.....je dirai plus, d'une famille qui.....(Avec effusion.) Enfin, voulez-vous dîner avec nous? (On se lève.)

Madame Malingear (surprise).—Hein?

Malingear.—Comment!.....aujourd'hui?.....

Madame Ratinois.—Oh! ce serait charmant.

Madame Malingear.—Un autre jour.....plus tard.....

Ratinois.—Un tel honneur.....serait du bonheur.....

Madame Ratinois.—Nous serions en famille.

4 (*a*) Write out in full the present subjunctive of the following verbs found in the passage:
dû; appartenir; pouvaient; recevez.

1 (*b*) Les renseignements que nous avons dû prendre. —Explain the reference.

Values.

2 (*c*) Répondez en français:

1. Quelles étaient les ouvertures flatteuses que les Ratinois avaient faites?

2. Quelle est l'attitude de Madame Malingear au sujet du dîner?

3 **3.** Write a note on the humour of the comedy.

10 **4.** Translate at sight into English:

Le point culminant d'Ottawa est occupé par le palais législatif.

Nous le visitons dès le lendemain de notre arrivée. Il est, du reste, avec les résidences du gouverneur général et du ministère, les seuls monuments dignes d'intérêt.. Le site nous retient longtemps en dehors du palais. Comment s'arracher au spectacle dont nous jouissons de ces hauteurs? L'Ottawa continue sa course et se couvre d'un nuage de vapeur soulevé par l'énorme chute de la Chaudière. Nous entendons vaguement l'écho du grondement formidable que lui arrache ce bond de géant, et nous distinguons dans le brouillard le pont jeté là pour relier les deux provinces. De l'autre côté de la rivière, Hull aligne ses rues, qui envahissent peu à peu la plaine et se perdent au loin en maisons isolées marquant d'avance les conquêtes de l'avenir.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

AGRICULTURE.

Time—Two and one-half hours.

Values.

6 **1.** (*a*) Describe experiments to ascertain the germinating power and the vitality of a sample of seed oats.

3 (*b*) Name *three* factors to be used in selecting seed potatoes from a field crop.

2. (*a*) Account for the value of clover—

2 (1) As a food for stock.

2 (2) As a crop in the field.

6 (*b*) Tell how Sweet Clover, Alsike Clover and Red Clover may be distinguished from each other and indicate a method of preparing any *one* for winter use.

3. Describe *either* Wild Buckwheat *or* Stinkweed under the headings:

2 (*a*) Distinguishing features of the plant.

2 (*b*) Its injurious nature.

3 (*c*) Control measures.

2 **4.** (*a*) Describe the Lady Bird beetle (Lady Bug) noting its food habits that make it worthy of at-
1 tention. Name *one other* insect of great value to agriculture in controlling insect ravages.

3 (*b*) Show *three* ways in which field mice under modern conditions of settlement are out of control and become a serious pest.

5. Give reasons for the following:

2 (1) Treating seed oats with formalin before sowing.

[OVER]

Values.

3 (2) A duckfoot cultivator is used to cultivate the soil in the drought area instead of harrows and disk.

3 (3) Stubble is cultivated with the disk immediately after harvest.

3 (4) Wheat is harrowed until it is four or five inches high.

6. Describe experiments to illustrate—

3 (1) Puddling and baking of clay.

3 (2) The effects of lime on clay soil.

3 (3) The sorting action of water.

7. Account for—

3 (1) The formation of alkali areas.

3 (2) The lodging of grain grown on the site of an old barnyard.

3 (3) The increase in the popularity of the sunflower as a silage plant.

4 **8.** (*a*) Describe an experiment to be used to compare the capacity of two soils for water.

6 (*b*) Name *three* factors affecting the temperature of soils. Show how each factor brings about its effect.

3 **9.** (*a*) Compare clover with rye as plants for green manuring.

3 (*b*) State with definite examples *three* conditions (in addition to the presence of essential mineral salts) necessary to the productivity of a soil.

4 **10.** (*a*) Explain the principle of the Babcock milk tester. Show how it is used in testing milk.

(*b*) Write a description of the Holstein under the headings:

2 (1) Origin.

2 (2) Characteristics.

2 (3) Importance in Alberta.

(*c*) Discuss the importance of the dairy industry in Alberta under the headings:

2 (1) Value as an industry in the Province.

2 (2) Bearing on soil fertility.

3 (3) Export trade possibilities.

2 **11.** (*a*) What *two* factors influence the securing of plant foods from the soil by the root hairs?

4 (*b*) Explain fully the transplanting of an ash sapling, showing how certain procedures are necessary to bring into action the factors mentioned in (*a*).

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

CHEMISTRY.

Time—Two and one-half hours.

Values.

5 **1.** In the preparation of oxygen from potassium chlorate and manganese dioxide, show by describing an experiment how you would prove that the oxygen was given off from the potassium chlorate.

2 **2.** (*a*) State the law of conservation of weight.

6 (*b*) Describe an experiment to illustrate the law named in (*a*). Make a drawing of the apparatus used.

2 **3.** (*a*) State the law of combining weights.

6 (*b*) The percentage compositions of cupric oxide and mercuric oxide are as follows:

Copper 79.9%.	Mercury 92.59%.
Oxygen 20.1%.	Oxygen 7.41%.

If the combining weight of oxygen is 16, find the combining weights of copper and mercury.

8 **4.** Describe Castner's electrolytic process for the preparation of chlorine.

5. Write equations expressing the chemical reactions which take place in the following experiments:

2 (*a*) Manganese dioxide and hydrochloric acid are heated together in a glass flask.

2 (*b*) A piece of fine copper wire is heated and plunged into a jar of chlorine.

[OVER]

Values.

2 (*c*) A saturated solution of chlorine in water is allowed to stand for some time in sunlight.

2 (*d*) Chlorine gas is passed into slaked lime.

8 **6.** If 260 g. of pure zinc are dissolved in dilute sulphuric acid, how many litres of hydrogen measured at 10°C and 750 mm. pressure will be given off?

2 **7.** (*a*) What is an anhydride?

6 (*b*) Write chemical formulae for the anhydrides of carbonic acid, sulphuric acid, nitric acid, phosphoric acid, nitrous acid and sulphurous acid.

8 **8.** (*a*) Write chemical equations for the reactions taking place in the preparation of carbon monoxide, acetylene, hydrogen and lime.

4 (*b*) Write an account of *two* commercial applications made of acetylene gas.

9. (*a*) Describe a method of making each of the following:

2 (1) rhombic sulphur

2 (2) monoclinic sulphur

2 (3) plastic sulphur.

(*b*) Write equations to express the chemical changes which take place in the following experiments:

2 (1) Ferrous sulphide and hydrochloric acid are gently heated together in a florence flask.

2 (2) Sulphuretted hydrogen is passed into a solution of copper sulphate.

2 (3) Sulphuretted hydrogen gas is burned in air.

5 **10.** (*a*) Name *five* of the commercial uses made of sulphuric acid.

3 (*b*) Give a suitable test for a soluble sulphate.

3 (*c*) Explain the formation of ordinary saltpetre in the soil in Eastern countries.

2 **11.** (*a*) Express by an equation the chemical change which takes place in the laboratory preparation of ammonia gas when lime is used as one of the substances.

6 (*b*) Describe a commercial preparation of nitric acid indicating the chemical reactions that take place in the process.

4 (*c*) Name and write chemical formulae for *two* important compounds of ammonia and state a commercial use of each.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

ENGLISH LITERATURE.

Time—Three hours.

JULIUS CAESAR.

Values.

10 **1.** In Plutarch's Lives, Shakespeare found the following statement: "Afterwards when Caesar's body was brought into the market place, Antonius, making his funeral oration in praise of the dead, according to the ancient custom of Rome, and perceiving that his words moved the common people to compassion, he framed his eloquence to make their hearts yearn the more."

Show by a careful analysis of the scene in the play what Shakespeare has developed from Plutarch's suggestion.

10 **2.** (*a*) In what respects are Brutus and Cassius contrasted? Brutus and Caesar? Brutus and Antony? Discuss fully and illustrate by reference to the play.

2 (*b*) What is the dramatic value of these contrasts?

8 **3.** Trace by definite reference to the play the successive steps by which Brutus arrives at a decision to join the conspiracy against Caesar.

3 **4.** What dramatic purpose is served by the Soothsayer? Casca? Lucius, the page, in Brutus's tent?

THE PASSING OF ARTHUR.

8 **5.** Explain the several qualities that make the following passages great poetry:

(*a*) "The bold Sir Bedevere uplifted him,
And bore him to a chapel nigh the field,

Values.

A broken chancel with a broken cross,
That stood on a dark strait of barren land:
On one side lay the ocean, and on one
Lay a great water, and the moon was full."

(*b*) "I heard the ripple washing in the reeds,
And the wild water lapping on the crag."

(*c*) "The great brand
Made lightnings in the splendour of the moon,
And flashing round and round, and whirl'd in an arch,
Shot like a streamer of the northern morn.

(*d*) "The island-valley of Avilion;
Where falls not hail, or rain, or any snow,
Nor ever wind blows loudly; but it lies
Deep-meadow'd, happy, fair with orchard lawns
And bowery hollows crown'd with summer sea."

7 **6.** "Not like that Arthur who with lance in rest,
From spur to plume a star of tournament
Shot thro' the lists at Camelot and charged
Before the eyes of ladies and of kings."

Place these lines in their context, summarizing or paraphrasing carefully what immediately precedes. Show why the contrast indicated ("Not like", etc.) is effective at this point in the poem.

PALGRAVE.

2 **7.** (*a*) Upon what simple event is the poem *Yarrow Unvisited* founded? What other poems of Wordsworth have you read which were based upon some other equally simple happening?

4 (*b*) What reasons does the poet give for leaving Yarrow unvisited? In what does the charm of the poem consist?

8 **8.** (*a*) "Full many a sprightly race
Disporting on thy margent green
The paths of pleasure trace;"

Describe "the paths of pleasure" referred to in the above quotation.

(*b*) "Nor care beyond today:
Yet see how all around 'em wait
The ministers of human fate
And black Misfortune's baleful train!"

What is the author referring to in "the ministers of human fate"? Enumerate them.

Values.

(*c*) "Where ignorance is bliss
'Tis folly to be wise."

Show how these lines make a very effective ending for the poem.

CLIVE.

10 **9.** "The servants of the [English] Company at Madras had been forced by Dupleix to become statesmen and soldiers."

Explain this statement fully.

8 **10.** "The greatest advantage which a government can possess is to be the one trustworthy government in the midst of governments which nobody can trust."

Discuss this statement in connection with the events of Clive's second visit to India.

VICAR OF WAKEFIELD.

12 **11.** Describe the various changes in the attitude of the Vicar and his family toward Mr. Burchell (Sir William Thornhill). Is there anything in these changes of attitude which suggests a lack of true insight into character on the part of the Primrose family? Discuss this point fully.

8 **12.** (*a*) Quote one passage of at least *ten* lines from *Julius Caesar*.

(*b*) Quote two passages of at least *seven* lines *each* from two of the following poets: Byron, Burns, Scott, Campbell.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

COMPOSITION.

Time—Three hours.

N.B.—Candidates should endeavor to submit papers which show neatness in form, freedom from mechanical errors and care in expression. Candidates should spend any extra time in reviewing, revising and rewriting answers in order to secure these qualities.

Values.

1. (*a*) Supply the right word in each blank left in the following sentences.

(*b*) Use the rejected word in each case correctly in an original sentence which will show clearly that you understand its exact meaning.

(1) A mirage is an optical..... (Allusion, Illusion).

(2) A large..... (percentage, per cent) of the audience could not hear the speaker.

(3) This is a new..... (species, specie) of political dishonesty.

(4) Bronson's uncle was an upright..... (notorious, notable) statesman.

(5) Doctor Smith's..... (vocation, avocation) is training bird dogs.

(6) Twelve..... (disinterested, uninterested) men composed the jury.

(7) He succeeded by close..... (observance, observation) of the golden rule.

(8) My young cousin is a very naive and..... (ingenious, ingenuous) girl.

(9) My mother is an..... (imaginative, imaginary) person.

Values.

(10) The summer house was almost concealed by a grove of..... (luxurious, luxuriant) tropical plants.

12 **2.** (*a*) Explain clearly why *each* of the following sentences is lacking in coherence.

8 (*b*) Rewrite each sentence in a form that makes it coherent.

(1) The engines became overheated, and after talking the matter over they decided to camp where they were.

(2) After not getting his football suit and when he couldn't find his shoes he refused to go on with the game.

(3) The hound was making a desperate attempt to get his forepaws over the side of the boat at the same time seizing the rope that held the boat in his teeth.

(4) I cannot begin to tell how many windows there are, but I know there are about as many as there are door-knobs, one of which is open that the breeze may blow in.

(5) This is a book that will be read by generations to come as well as those gone by.

(6) I then drop the corn mixture by tablespoonfuls into the hot fat and fry like eggs, turning over when one side is a golden brown.

(7) The behaviour of the boys can hardly be excused, refusing to help the old man when he cried out to them.

(8) Some women have the habit of powdering their noses, no matter where they are, and seeming to enjoy it.

3. "The topic sentence is most effective when short and striking."

3 (*a*) Write *four short and striking* topic sentences using four of the subjects given in (*b*) part of this question.

17 (*b*) Expand *one* of your topic sentences into an effective paragraph about sixteen lines in length.

(1) Radio.

(2) A great disappointment.

(3) Alone in a strange town.

(4) A Marathon race.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

GEOMETRY.

Time—Three hours.

Values.

1. "When a figure consisting of a line or lines contains all the points that satisfy a given condition, and no others, this figure is called the locus of these points."

5 (*a*) Explain clearly this statement, using one example.

6 (*b*) AB is a given straight line and from A straight lines are drawn perpendicular to all lines passing through B. Find the locus of the middle points of these perpendiculars.

6 **2.** (*a*) Parallelograms on the same base and between the same parallels are equal in area. II-6.

5 (*b*) Show how to draw on the base of a given triangle an isosceles triangle of equal area.

7 **3.** Describe a triangle equal to a given rectilineal figure, and having an angle equal to a given angle.

7 **4.** (*a*) If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the segments of the base have the same ratio which the other two sides have to one another. III-3.

7 (*b*) A flag pole is 50 ft. high. The lower 20 ft. is painted black, the upper 30 ft. white. Calculate the distance from the base of the pole where the black portion will subtend the same angle as the white portion.

8 **5.** (*a*) The areas of similar triangles are proportional to the squares on their corresponding sides. III-11.

[OVER]

Values.

7 (*b*) A point O is taken in the diameter PQ produced of a circle. OT is a tangent, and the tangent at P cuts OT produced at N. If D is the centre of the circle, prove that $\triangle$ OPN : $\triangle$ OTD = OP : OQ.

6 **6.** (*a*) A is the centre of a circle and B is a point such that AB is longer than the radius. Find, by geometrical construction, the tangents from B to the circle, and prove the correctness of your construction.

5 (*b*) If in (*a*) the length AB is twice that of the radius of the circle, find, in degrees, the angle between the tangents.

6 **7.** (*a*) Inscribe a circle in a given triangle. IV-18.

5 (*b*) Construct an isosceles triangle having given the vertical angle and the radius of the inscribed circle.

8 **8.** (*a*) If *a*, *b*, *c* are the sides of a triangle and *d* is the projection of *c* on *a*, enunciate the theorems corresponding to the following formulae and prove any *one* of them.

$$b^2 = c^2 + a^2 + 2cd.$$

$$b^2 = c^2 + a^2 - 2cd.$$

$$b^2 = c^2 + a^2.$$

6 (*b*) ABC is a triangle and AD is the median to the middle point of BC. Prove $\overline{AB}^2 + \overline{AC}^2 = 2\overline{AD}^2 + 2\overline{DC}^2$.

6 **9.** Find the mean proportional between two given straight lines. V-4.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

ALGEBRA.

Time—Three hours.

Values.

7 **1.** Solve $x^4+x^2y^2+y^4=2923$

$x^2-xy+y^2=37.$

6 **2.** Simplify: $(.25)^{\frac{3}{2}}$ a^0 ; $(.00032)^{-\frac{2}{5}}$; $\left(\frac{25a^4}{49b^4}\right)^{-\frac{3}{2}}$

5 **3.** Solve $x^{\frac{2}{3}}-y^{\frac{2}{3}}=\frac{35}{4}$

$x^{\frac{1}{3}}-y^{\frac{1}{3}}=\frac{5}{2}$

2 Verify the roots.

6 **4.** Simplify:

$(\sqrt{5}+\sqrt{2})(2\sqrt{3}-\sqrt{2})(5-2\sqrt{2})(\sqrt{3}-3\sqrt{2}).$

7 **5.** Solve for x and y: $x+y+\sqrt{x+y}=30$

$x-y+\sqrt{x-y}=12.$

7 **6.** Find the equation whose roots are each greater by R than the roots of $ax^2+bx+c=0$.

6 **7.** Find relations existing among a, b and k which will make the roots of $3ax^2-2bx+2k=0$.

(a) equal,

(b) rational, but not equal.

(c) imaginary.

[OVER]

Values.

3 **8.** Construct an equation the roots of which are irrational.

5 **9.** Find a third proportional to ab^2 and a^4b^3.

6 **10.** If $ax+by : bx+ay=9 : 11$ and $a : b=3 : 2$ find the ratio of x to y.

5 **11.** Factor completely: $\frac{x^3}{8} - 27y^3$

5 **12.** Factor completely: $12(x^2-y^2)-7xy$.

5 **13.** Factor completely: x^3-x^2-x+10.

5 **14.** Factor completely: $2x^2+bx-ax-ab-a^2$.

12 **15.** A rectangle is 21 inches long and 20 inches wide. The length of the rectangle is decreased twice as much as the width, thereby decreasing the length of the diagonal 4 inches. Find, correct to one place of decimals, the dimensions of the new rectangle.

8 **16.** Draw the graphs of $x^2+y^2=25$ and $x+y=0$. Read from the graph the value of the roots when the equations are treated as simultaneous.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

ARITHMETIC.

Time—Three hours.

Values.

7 **1.** (*a*) In the middle of a rectangular plot of ground 88 yd. by 70 yd. is dug a circular tank of radius 14 yd. and 10 yd. deep. If the earth taken out be spread evenly over the rest of the plot, find by how many inches the rest of the plot is raised.

4 (*b*) Find the number of board feet in the largest piece of square timber that can be cut from a log 18 in. in diameter and 18 ft. long.

9 **2.** A man owes $400 due in one year, $300 due in two years, and $200 due in three years. What sum paid now would discharge the debt, money being worth 5% compound interest?

4 **3.** (*a*) What discount is equivalent to giving an extra oz. on each pound for good weight?

6 (*b*) A man owes a debt of $6000 due in 6 months. If he pays one-third of it in three months, and one-fifth of it in five months, when may the balance be equitably paid?

10 **4.** Johnson & Wilson went into business together. At first, Johnson put in $3000 and at the end of a year he put in an additional $1500. Wilson at first invested $3500, but at the end of 15 months he withdrew $1000. At the end of a year Miller joined the firm, making an investment of $2250. Profits were not divided until the business had been in operation for 2 years, at which time Miller received $900. Find the profits due each of the others.

[OVER]

Values.

2 **5.** (*a*) What is meant by "standard" time?

2 (*b*) Why does it differ from "true" time?

6 (*c*) What is the true time in a city 117° 25′ west longitude, when the standard time is 2.48 P.M.?

3 **6.** (*a*) What is the price of stock when $5\frac{1}{2}\%$ stock pays 8% on the investment?

10 (*b*) A man wishes to invest a sufficient amount in bonds to assure his wife of a net annual income of $1600 after paying an income tax of 4% on all over $1000. If he selects Province of Alberta $4\frac{1}{2}\%$ bonds when they are quoted at $95\frac{1}{2}$ with brokerage $\frac{1}{2}\%$, what amount must he invest?

8 **7.** The Dominion Fire Insurance Co. charges an average rate of $1\frac{1}{4}\%$ for insurance for a term of one year. Its agents are allowed a commission equal to 15% of the premium. Expenses of management, office rent, printing, etc., amount to $7,400. Fire losses for the year equal 44% of the total premiums. What was the total amount of risk carried by the company if its receipts for a year exceeded its disbursements by $4,900?

8 **8.** (*a*) A railway cutting 10 metres deep has to be made with one side vertical and the other inclined at 45° to the vertical. The bottom is to be 12.4 metres wide. How many steres of earth and rock must be removed per kilometer?

3 (*b*) A circle and a square have equal areas. Find the ratio of their perimeters.

9. The length of one degree on a parallel of latitude is given for certain latitudes as follows:

Latitude	0	10	20	30	40	50	60	70	80
Length in miles	69.2	68.1	65	60	53.1	44.6	34.7	23.7	12.1

7 (*a*) Draw a graph of the above.

3 (*b*) Using the graph, determine the *approximate* length of a degree in latitudes 15°, 44°, 68°.

8 **10.** If sterling exchange is quoted in Edmonton at 4.865, and exchange between London and Paris is 25.10 francs to the pound, what should an Edmonton merchant pay for a bill of exchange on London to pay a debt in Paris of 10,000 francs?

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

GENERAL AND CANADIAN CONSTITUTIONAL HISTORY.

Time—Two and one-half hours.

NOTE TO CANDIDATES: Candidates will answer three questions from Section A and three from Section B, one of which must be Question 5.

SECTION A.

Values.

1. "The more favorable the environment is, the greater the opportunity for progress."—Botsford.

Show what influence environment had in promoting and retarding the civilisation and power of

4 (*a*) The Egyptians,

3 (*b*) The Babylonians,

6 (*c*) The Greeks,

4 (*d*) The Romans.

2. "Though their [the Spartan] public and social life was a great advance beyond that of the Orient, it was defective in two respects."—Botsford.

17 Describe the social and political organisation of the Spartans, making clear its good qualities and defects.

17 **3.** Compare the character and achievements of Julius Caesar and Octavianus.

4. "Though in the centuries following Charlemagne it saved society from complete dissolution, feudalism was itself but a step removed from anarchy."—Botsford.

[OVER]

Values.

17 Trace the origins and growth of the feudal system in the later Roman Empire and the early Middle Ages, showing the truth of the above statement.

SECTION B.

2 **5.** (*a*) Define clearly the meaning of the term "responsible government" as used in Canadian history.

15 (*b*) Trace in some detail the evolution of responsible government in the Canadas and the Maritime Provinces.

16 **6.** State and compare the functions and powers of the Governor-General and the Prime Minister of Canada.

16 **7.** Give a careful account of the various forms of municipal organisation in the Province of Alberta.

8. Write notes on *four* of the following:

4 (*a*) The Bill of Rights (1689),

4 (*b*) Extradition,

4 (*c*) Canada and the treaty-making power,

4 (*d*) The method of petitioning the Houses of Parliament,

4 (*e*) The revenues of school districts,

4 (*f*) Habeas Corpus.

100

Values.

(5) My favorite magazine.

(6) The character I like best in fiction.

(7) My idea of a true sportsman.

(8) The value of physical training.

40 **4.** Write a composition at least two pages in length choosing as your theme *one* of the following subjects taken from your supplementary reading:

(*a*) Father Holt.

(*b*) The Smallpox comes to Castlewood.

(*c*) Esmond at Cambridge and What he Did There.

(*d*) Marlborough.

(*e*) Beatrix Suffers a Great Disappointment.

(*f*) Auburn, as Goldsmith First Saw It.

(*g*) The Character of Goldsmith.

(*h*) Gathering Material for "The Traveller."

(*i*) The Literary Club.

(*j*) Goldsmith's Boyhood.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

GERMAN.

Time—Three hours.

PART I (GRAMMAR AND COMPOSITION)

Values.

6 **1.** Give a list of the prepositions governing both dative and accusative. By taking one preposition illustrate in two German sentences the difference in the use of these cases.

10 **2.** Translate into German:

(*a*) The children have remained.
(*b*) On account of the rain.
(*c*) Without laughing.
(*d*) He has had to go.
(*e*) All that I have.
(*f*) You have succeeded.
(*g*) What day of the month is it?
(*h*) She is a relative of mine.
(*i*) It is I.
(*j*) Has he not followed me?

6 **3.** Decline together:

(*a*) Sein altes Schaf
(*b*) Jene junge Mutter
(*c*) Dieser lange Stiefel.

20 **4.** Translate into German:

(*a*) Your clothes are quite wet, Frederick; take them off at once.

Values.

(*b*) The man whom I met in the street yesterday came to see me today.

(*c*) Have you heard Miss Schwarz sing?

(*d*) It is now thirteen minutes to nine, and we should start for school before it rains.

(*e*) In spring the days are shorter than in summer, but in winter they are shortest of all.

(*f*) Is this your boot or your sister's? It is hers; mine is upstairs.

(*g*) Those houses have been built for ten years; they belong to my father now.

(*h*) Bread and eggs are both eaten by man, who, however, needs many other things also.

(*i*) I prefer to be in the country in the autumn; how beautiful the woods and mountains are in autumn!

(*j*) The woman is ashamed of her friend and says that she does not remember her.

8 **5.** Translate into German:

Have you ever visited Jasper Park? It lies about two hundred miles west of Edmonton and contains many wonderful things. Some people consider that Lake Maligne is the most beautiful lake in the Canadian Rockies. It is about eighteen miles long and is divided into two parts. Every year more and more travellers visit Jasper, which, with its beautiful mountains and streams, is one of the most wonderful places in Canada.

PART II

(*AUTHORS AND SIGHT TRANSLATION*)

12 **1.** Flemming. Der Knabe Peter Dörmann war von Herrn Diercks in höchst leichtfertiger und ungerechter Weise beschuldigt worden. Der Knabe verteidigte sich in angemessener Form. Darauf nannte ihn Herr Diercks einen "frechen Lügner" und versuchte ihn zu schlagen. Dagegen sträubte sich der Knabe, und daran tat er recht.

Flachsmann (überlegen). Das ist ja alles ganz gleichgültig. Ein Schüler hat sich unter allen Umständen zu unterwerfen.

Flemming. Das ist Ihr System, das weisz ich. Alles, was Charakter und Eigenart hat, wird geduckt. Ich mache aber nicht mit. Wenn ich ein Unrecht einstecke, ist es meine Sache. Meine Schüler schütze ich.

Flachsmann. Dann wird der Knabe eben von einem andern bestraft werden.

Flemming. Ich glaube das nicht, Herr Flachsmann. Denn der den jungen schlägt, der musz erst mich schlagen, und was mich betrifft.....ich haue wieder!

Flachsmann (keifend). Herr Flemming! Sie werden noch erfahren, dasz ich hier Herr bin!

Flemming (mit groszer, vornehmer überlegenheit). Herr Flachsmann! Das ist ein Irrtum! Sie sind von uns beiden der Vorgesetzte; aber ich bin der Herr. Ich schliesze die Sitzung. (Ab.)

Diercks (kommt eilig aus der Tür des Lehrmittelzimmers, triumphierend). Das ist ja groszartig!

Flachsmann. Das bricht ihm das Genick.

2 (*a*) Write out the first person singular of the perfect tense of the following verbs occurring above:

war; verteidigte sich; nannte; unterwerfen.

4 (*b*) Decline in full with the definite article the following words found in the passage:

Schüler; Umständen; Sache; Jungen.

3 (*c*) "Sie sind von uns beiden der Vorgesetzte; aber ich bin der Herr."—Explain briefly what Flemming means by this statement.

11 **2.** Translate into English:

Flachsmann (trotzig). Wenn ich nichts kann, dann hätte mich der Staat nicht anstellen sollen.

Prell. Herr, da sprechen Sie das erste vernünftige Wort. Sie eignen sich zum Schulmeister wie das Mufflon zum Gedankenleser! (Die Hände zusammenschlagend und verschränkend.) Was war das heute wieder für eine Stunde, die Sie da gaben! Es war ja unglaublich! Die Antworten der Kinder waren ja oft klüger als Ihre Fragen! Ihre Fragen waren ja Kasernenhofblüten! Sie fragten die Kinder: "Was wird bei der Hochzeit zur Familie gelegt?" und als Antwort wollten Sie haben: "Der Grund"! Ja, nun frage ich einen Menschen! (Geht wieder auf und ab. Dann wieder bei Flachsmann stehen bleibend.) Wo haben Sie eigentlich Ihr Examen gemacht?

Flachsmann. In Weiszenfels.

Prell. In Weiszenfels? Wann?

Flachsmann. 1869.

Prell. 1869?.....Dann haben Sie das Examen als Auswärtiger gemacht.

Flachsmann (stutzt einen Augenblick). Ja..... jawohl.

Values.

Prell. Ich habe nämlich das Weiszenfelser Seminar besucht und 69 das Examen gemacht.

Flachsmann (beklommen). Jaa? So.....Herr Schulrat, die Stunde musz gleich aus sein.....ich .....ich bin gern dabei, wenn die Kinder auf den Hof gehen.....

1 (*a*) "Kasernenhofblüten. Write a brief explanatory note on this expression.

2 (*b*) In the final speech by Flachsmann, closing the passage, explain why Flachsmann shows embarrassment.

2 (*c*) Translate into German:
1. You ought not to have done it.
2. I passed my examination at Hamburg.

3 (*d*) Write a concise note on the literary career of the author of the play read.

10 **3.** Translate at sight into English:

"Wie du mir, so ich dir"

Ein Schulknabe bat einmal einen Mitschüler so freundlich zu sein und ihm ein gewisses Buch zu leihen. Der letztere mochte jedoch nicht gern seine Bücher verleihen und sagte daher: "Ich gestatte nie, dasz meine Bücher aus meinem Zimmer kommen; aber wenn du hierher kommen willst und in meinem Studierzimmer lesen, so bist du mir willkommen, und kannst sie den ganzen Tag benutzen."

Einige Tage später konnte der ungefällige Knabe sein Feuer nicht zum brennen bringen, und sandte daher zu seinem Bekannten und bat ihn um seinen Blasebalg *für einige Minuten.

Aber dieser erwiderte, er gestatte nie, dasz sein Blasebalg aus dem Zimmer käme, wenn er jedoch kommen wollte und denselben in seinem Zimmer benutzen, so könne er das den ganzen Tag thun.

*Bellows.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

LATIN (GRADE XI)

OR

LATIN (2).

Time—Three hours.

SECTION A (AUTHORS).

Values.

8 **1.** Translate into English:

Hic etsi crimine Pario est accusatus, tamen alia causa fuit damnationis. Namque Athenienses propter Pisistrati tyrannidem quae paucis ante annis fuerat, omnium civium suorum potentiam extimescebant. Miltiades, multum in imperiis magistratibusque versatus, non videbatur posse esse privatus, praesertim cum consuetudine ad imperi cupiditatem trahi videretur. Nam Chersonesi omnes illos quos habitarat annos perpetuam obtinuerat dominationem tyrannusque fuerat appellatus, sed iustus.

1 (*a*) Pario crimine.——What was this?

1 (*b*) What was the greatest achievement of Miltiades, and how was it rewarded?

8 **2.** Translate into English:

Hic uxorem numquam duxit. In quo cum reprehenderetur, quod liberos non relinqueret, a Pelopida qui filium habebat infamem, maleque eum in eo patriae consulere diceret, "Vide," inquit, "ne tu peius consulas qui talem ex te natum relicturus sis. Neque vero stirps potest mihi deesse; namque ex me natam relinquo pugnam Leuctricam, quae non modo mihi superstes, sed etiam immortalis sit necesse est."

1 (*a*) pugna Leuctrica.——What did Epaminondas accomplish by this?

1 (*b*) What is the final proof given by Nepos of the greatness of Epaminondas?

Values.

8 **3.** Translate into English:

Iudicium sanctique placet sententia montis
omnibus; arguitur tamen atque iniusta vocatur
unius sermone Midae. Nec Delius aures
humanam stolidas patitur retinere figuram,
sed trahit in spatium villisque albentibus implet
instabilesque imas facit et dat posse moveri.
Cetera sunt hominis; partem demnatur in unam,
induiturque aures lente gradientis aselli.

1 (*a*) Sancti montis.—To what is the reference?

1 (*b*) Delius.—To whom is this epithet applied and why?

8 **4.** Translate into English:

Fecerat exiguas iam sol altissimus umbras;
quae mora sit sociis miratur Agenore natus
vestigatque viros. Tegumen direpta leonis
pellis erat, telum splendenti lancea ferro
et iaculum, teloque animus praestantior omni.
Ut nemus intravit letataque corpora vidit
victoremque supra spatiosi corporis hostem
tristia sanguinea lambentem volnera lingua,
"Aut ultor vestrae, fidissima corpora, mortis
aut comes" inquit, "ero."

1 (*a*) Agenore natus.—What is his name?

1 (*b*) Explain how the first line of this passage describes the exact time of the action.

10 **5.** Translate into English at sight:

THE RELATIONS OF PELOPIDAS AND EPAMINONDAS

Hoc tam turbido tempore, sicut supra docuimus, Epaminondas, quoad cum civibus dimicatum est, domi quietus fuit. Itaque haec liberatarum Thebarum propria laus est Pelopidae, ceterae fere communes cum Epaminonda. Namque in Leuctrica pugna imperatore Epaminonda hic fuit dux delectae manus quae prima phalangem prostravit Laconem. Denique Pelopidas fuit secunda persona Thebis, sed tamen secunda ita ut proxima esset Epaminondae.

Quoad—so long as. proprius—special, particular.
prosterno—overcome. Laco—Spartan.
denique—in short.

SECTION B (GRAMMAR AND COMPOSITION)

Values.

1. Decline in combination through both numbers:

3 (*a*) *haec manus delecta;*

2 (*b*) *idem tempus.*

3 **2.** Write the *genitive singular* of *crimen* and *voluntas,* the *ablative singular* of *caput* and *mare,* and the *genitive plural* of *casus* and *civis.*

5 **3.** Give the genitive singular of *quis*
the accusative singular of *aliquis*
the genitive plural feminine of *qui, quae, quod*
the genitive plural of *ego*
the dative singular of *quisquam.*

6 **4.** Give the other degrees of comparison for—
(*a*) *utilior, magnus, acerrimus;*
(*b*) *facillime, maxime, diutius.*

5 **5.** Give the principal parts of the verbs from which are derived the following forms:
trahi, coniectus est, discessisset, coegit, adiuverant.

5 **6.** Write a brief example in Latin to illustrate each of the following points of syntax:
(*a*) the Ablative Absolute;
(*b*) the Ablative of Agent;
(*c*) the Indirect Question;
(*d*) Indirect Narration;
(*e*) the Objective Genitive.

7. Translate into Latin:

6 (*a*) A few years before; by some chance or other; as soon as possible; at the third watch; on the top of the mountain; enough men.

5 (*b*) The danger from (*ex*) the cavalry of the enemy was so great that no one dared (*audeo*) to leave the town.

5 (*c*) I shall read more slowly (*lente*) in order that you may all understand what the story is saying.

5 (*d*) He answered that he would make peace if they surrendered (*dedo*) to him the chiefs of the rebellion (*defectus,* 4).

50

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XI.

PHYSICAL SCIENCE.

Time—Two and one-half hours.

Values.

2 **1.** (*a*) Distinguish longitudinal waves from transverse waves, and by using a diagram explain the following terms as applied to each: wave length, vibration frequency, amplitude of vibration and period of vibration.

4

4 (*b*) Describe an experiment to show that the loudness of a sound is dependent on the density of the medium in which the sound is produced.

3 **2.** (*a*) Explain the resonance of an air column with a tuning fork, (1) in an open tube.

3 (2) in a closed tube.

4 (*b*) How may the principle of resonance be used to calculate the velocity of sound in air?

2 **3.** (*a*) Explain sympathetic vibrations and give two clear examples of their formation.

2

6 (*b*) What six basal principles in sound production are used in the construction of a piano?

5 **4.** (*a*) Give an experimental demonstration of the Law of Inverse Squares as applied to light.

6 (*b*) By drawing a diagram, show how the eye may see any *two* of the three images on an object placed between two mirrors inclined at an angle of 90° to each other.

Either

4 **5.** (*a*) Account for the efficiency of "luxfer" prisms as used to illuminate dark basements from the sidewalk. Draw a diagram.

4 (*b*) Explain how you might experimentally produce
4 a pure spectrum. Account for the color phenomenon produced, using a diagram.

5 (*c*) Draw a diagram to explain how a double convex lens may be used as a magnifying glass.

Or

11 **6.** (*a*) Describe what happens to the image, properly caught on a screen, of a lighted candle placed far in front of a concave mirror in a darkened room and gradually moved closer and closer to the mirror until it reaches the centre of the mirror.

6 (*b*) Describe *two* ways of recomposing the seven colors of the spectrum into white light.

3 **7.** (*a*) What is the molecular theory of magnetism?
3 Give three experimental evidences that point to the truth of the theory.

2 (*b*) How might you show experimentally, that a magnet is surrounded by an actual field of force?
4 Using this field of force surrounding a magnet, explain magnetic attraction and repulsion.

3 **8.** (*a*) How is the electrostatic charge distributed over a sphere, over a cylinder with rounded ends and
2 over a pear shaped conductor? How might you demonstrate the correctness of your answer?

5 (*b*) What are the essentials in the process of electroplating a silver spoon? Describe the changes within the electrolyte.

6 (*c*) You are given a bar of soft iron bent into the form of a U with one end marked N. Show by a diagram, and explain how to make this into an electromagnet with the pole N correctly marked.

Either

8 **9.** (*a*) Show by a diagram the construction and connections of a two station electric telegraph system, using a key, a sounder and a relay, and explain its operation.

2 (*b*) What is an induced current? Describe two dis-
4 tinct methods of producing an induced current in a circuit.

Or

Values.

2 **10.** (*a*) What is an alternating current of electricity?

2 Why is it so commonly used in preference to direct current electricity?

10 (*b*) Describe the construction of an induction coil and explain its action. Why is the condenser used in this instrument?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

FRENCH (GRADE XI)

OR

FRENCH (2).

Time—Three hours.

PART I.

GRAMMAR AND COMPOSITION.

Values.

5 **1.** Explain with illustrative sentences the usual method of comparing adjectives in French.

10 **2.** Translate into French:

(*a*) Some bread and meat.
(*b*) I have not any money.
(*c*) She has gone away.
(*d*) What do you say?
(*e*) How warm it is!
(*f*) Are you sleepy?
(*g*) Something good.
(*h*) She has not seen anything.
(*i*) My best books.
(*j*) Whose hat is that?

3. Translate into French:

2 (*a*) When do you go to bed? Oh, usually about half-past ten, but sometimes later than that.

3 (*b*) He wished you had come sooner. It is very cold now, but the weather was beautiful.

3 (*c*) The city of Quebec was founded by Champlain in sixteen hundred and eight. Champlain died on Christmas Day sixteen hundred and thirty-two.

Values.

2 (*d*) Here you are at last! Where have you come from and what have you been doing?

3 (*e*) How long have you been in Alberta? We have been living here for fifteen years.

3 (*f*) I have never seen so many people anywhere; the streets are full.

2 (*g*) The books we have bought have all been burned.

3 (*h*) My father is an officer, my uncle is a priest and my brother intends to be a merchant.

2 (*i*) The man whose watch I found is my cousin's oldest friend.

2 (*j*) What you say is true, but it makes no difference.

10 **4.** Every Canadian should speak both English and French, for Canada is made up of two great races and each of these is rightly proud of the noble language and literature which has come down to it from the past. In Canada the cultures (culture, f.) of the two greatest nations in the world unite and it is your duty and mine to profit by this wonderful inheritance (héritage, m.).

PART II.

AUTHORS AND SIGHT TRANSLATION.

10 **1.** *Translate into English:*

Madame Malingear.—J'ai eu tort.....La première fois que cette dame nous fera visite, je rétablirai les choses dans leur vraie situation....."Madame, je vous présente M. le docteur Malingear, un fruit sec de la Faculté.....Il ne soigne que des cochers gratis! .....Mademoiselle Malingear.....elle sait lire, écrire, compter. Madame Malingear.....qui fait ses robes elle-même et raccommode avec tendresse les habits de son mari....."

Malingear.—Il est inutile d'entrer dans ces détails, et plus inutile encore d'entasser tous ces mensonges .....Veux-tu que je te le dise, c'est de l'orgueil, c'est de la vanité.....Tu veux jeter de la poudre aux yeux!

Madame Malingear.—C'est vrai.....j'en conviens.

Malingear.—Ah!

Madame Malingear.—Mais, en cela, je ne fais que suivre l'exemple de mes contemporains.....Chacun passe sa vie à jeter de petites pincées de poudre dans l'oeil de son voisin.....Pourquoi fait-on de la toilette? pourquoi a-t-on des diamants, des voitures, des livrées? Pour les yeux des autres!

Values.

Malingear.—Allons donc!

Madame Malingear.—Mais, toi-même.....sans t'en douter.....tu obéis à l'entraînement général.

5 (*a*) Write out the principal parts of the following verbs occurring in the extract: sait; lire; écrire; veux; conviens.

(*b*) *Translate into French:*

1 1. Pay me a visit.

2 2. I have never suspected it.

2 3. Please introduce me to the doctor.

10 **2.** *Translate into English:*

Malingear.—Les renseignements que nous avons dû prendre, tant sur monsieur votre fils que sur la famille à laquelle il a l'honneur d'appartenir.....ces renseignements qui n'avaient et ne pouvaient avoir aucun caractère inquisitorial, soyez-en persuadés.....ces renseignements, dis-je, nous ont amenés à penser qu'il y avait lieu de prendre en considération sérieuse..... les ouvertures flatteuses que vous avez bien voulu nous faire. (Il se rassied.)

Ratinois (se levant, et très ému).—Docteur, je crois être le fidèle interprète des sentiments de madame Ratinois.....et des miens propres.....et le ceux de mon fils Frédéric.....avocat.....en vous disant, avec une émotion.....que vous comprendrez .....car c'est celle d'un père.....et vous êtres mère, madame.....en vous disant: Docteur, recevez en ce jour les bénédictions.....et la gratitude affectueuse d'une famille.....qui.....que.....je dirai plus, d'une famille qui.....(Avec effusion.) Enfin, voulez-vous dîner avec nous? (On se lève.)

Madame Malingear (surprise).—Hein?

Malingear.—Comment!.....aujourd'hui?.....

Madame Ratinois.—Oh! ce serait charmant.

Madame Malingear.—Un autre jour.....plus tard.....

Ratinois.—Un tel honneur.....serait du bonheur.....

Madame Ratinois.—Nous serions en famille.

4 (*a*) Write out in full the present subjunctive of the following verbs found in the passage:
dû; appartenir; pouvaient; recevez.

1 (*b*) Les renseignements que nous avons dû prendre. —Explain the reference.

Values.

2 (*c*) Répondez en français:

1. Quelles étaient les ouvertures flatteuses que les Ratinois avaient faites?
2. Quelle est l'attitude de Madame Malingear au sujet du dîner?

3 **3.** Write a note on the humour of the comedy.

10 **4.** Translate at sight into English:

Le point culminant d'Ottawa est occupé par le palais législatif.

Nous le visitons dès le lendemain de notre arrivée. Il est, du reste, avec les résidences du gouverneur général et du ministère, les seuls monuments dignes d'intérêt. Le site nous retient longtemps en dehors du palais. Comment s'arracher au spectacle dont nous jouissons de ces hauteurs? L'Ottawa continue sa course et se couvre d'un nuage de vapeur soulevé par l'énorme chute de la Chaudière. Nous entendons vaguement l'écho du grondement formidable que lui arrache ce bond de géant, et nous distinguons dans le brouillard le pont jeté là pour relier les deux provinces. De l'autre côté de la rivière, Hull aligne ses rues, qui envahissent peu à peu la plaine et se perdent au loin en maisons isolées marquant d'avance les conquêtes de l'avenir.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

ALGEBRA.

Time—Three hours.

Values.

7 **1.** Solve the equations:

$$x^2+xy+xz=18$$
$$y^2+yz+yx=-12$$
$$z^2+zx+zy=30$$

Or

$$12x^4+4x^3-41x^2+4x+12=0$$

7 **2.** The 4th, 42nd and last terms of an A.P. are 0, —95 and —125 respectively. Find the first term and the number of terms.

6 **3.** Sum to infinity the following series:

$$\frac{1}{\sqrt{2}}-\frac{1}{3}+\frac{\sqrt{2}}{9}-\frac{2}{27}+\ldots\ldots\ldots\ldots$$

7 **4.** Find the value, expressed as a fraction in its lowest terms, of the recurring decimal 0.34545.....

Or

Find the sum of $2n$ terms of the series

$$\frac{5}{6}+\frac{6}{6^2}+\frac{5}{6^3}+\frac{6}{6^4}+\frac{5}{6^5}+\frac{6}{6^6}$$

7 **5.** If $\frac{x}{a}=\frac{y}{b}=\frac{z}{c}$, prove

$$(a^2+b^2+c^2)(x^2+y^2+z^2)=(ax+by+cz)^2.$$

[OVER]

Values.

7 **6.** The equations $x^2-2ax+b=0$ and $x^2-2bx+c=0$ have a common root. Find the relation between a and b to meet this condition. Find the common root.

9 **7.** When a weight is hung by an elastic string of given material, the extension varies as the weight, as the unstretched length of the string, and inversely as the square of the diameter of the string. If a weight of 8 pounds stretches a string 2.5 ft. long and of $\frac{1}{4}$ in. diameter to a length of 2.7 ft., to what length will a weight of 10 pounds stretch a string of the same material 3.25 ft. long and of $\frac{1}{6}$ in. diameter?

7 **8.** Find the sum of the series:

$1^2+3^2+5^2+\ldots$ to n terms.

7 **9.** Sum to n terms $3+33+333+3333+\ldots\ldots\ldots$

Or

Show that $3^{\frac{1}{3}}.\ 9^{\frac{1}{9}}.\ 27^{\frac{1}{27}}.\ 81^{\frac{1}{81}}+\ldots$.ad inf. $=3^{\frac{3}{4}}$

7 **10.** How many different permutations can be made of the letters of the word "essences" all taken at once? How many of these will begin with n and end with c?

Or

12 girls wish to divide themselves into two equal groups for a game of basketball. If two of the girls are sisters, in how many ways can the two teams be selected so that the two sisters will not play on the same side?

5 **11.** (a) Find the sum of the coefficients in the expansion of $(1+x)^n$.

7 (b) In the expansion of $\left(x^2-\frac{2}{x^3}\right)^{15}$ find the numerical value of the term independent of x.

7 **12.** Find the coefficient of x^{20} in $\frac{1-2x}{(1-x)^2}$

10 **13.** A city borrows by debentures \$200,000 bearing interest at 5% compounded annually. This loan is to be repaid, both principal and interest, in 20 equal annual payments. Find the amount of the annual payment.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

TRIGONOMETRY.

Time—Three hours.

Values.

3 **1.** (*a*) Find the values of the trigonometric functions of the smallest angle in the triangle whose sides are 3, 4 and 5.

5 (*b*) Trace the changes in sign and magnitude of the tangent of an angle as the angle increases from 0° to 360°, illustrating by accompanying drawings.

4 **2.** (*a*) Establish the relationship between the sexagesimal and the radian measurements of an angle.

5 (*b*) If the speed of an automobile is 30 miles per hour, what is the angular speed in radians per second of one of its wheels, if the wheel is 30 inches in diameter?

8 **3.** (*a*) Establish geometrically the formula for the Sine of the sum of two acute angles.

6 (*b*) Find from the table the trigonometric ratios of 69° and 47° and use the required formula to compute Sin 116°. Check the correctness of your answer by means of the tables.

4. Prove *any two* of the following identities:

5 (*a*) $\tan 2\theta + \text{Sec } 2\theta = \dfrac{\text{Cos } \theta + \text{Sin } \theta}{\text{Cos } \theta - \text{Sin } \theta}$

5 (*b*) $\dfrac{1+\text{Sin A}+\text{Cos A}}{1+\text{Sin A}-\text{Cos A}} = \text{Cot}\dfrac{\text{A}}{2}$

5 (*c*) Cot A. Cot B+Cot B. Cot C+Cot C. Cot A=1 where A, B and C are the angles of a triangle.

[OVER]

Values.

5. Attempt two parts only.

6 (*a*) Prove $\tan A+\tan B+\tan C=\tan A.\tan B.\tan C$ where A, B and C are the angles of a triangle.

6 (*b*) In any triangle show that $b^2 \operatorname{Sin} 2C+c^2 \operatorname{Sin} 2B=$ 4 times the area of the triangle.

6 (*c*) Deduce the formula: $\tan \frac{A-B}{2}=\frac{a-b}{a+b}.\ \operatorname{Cot}\frac{C}{2}$

6 **6.** (*a*) Prove $2R=\frac{a}{\operatorname{Sin} A}=\frac{b}{\operatorname{Sin} B}=\frac{c}{\operatorname{Sin} C}$ where R is the radius of the circle circumscribing the triangle ABC.

6 (*b*) Solve the equation:

$$\operatorname{Cos}^{-1}x-\operatorname{Sin}^{-1}x=\operatorname{Cos}^{-1}x\sqrt{3}$$

7 **7.** A 25 foot flagstaff stands on the top of a house. From a point in the plane on which the house stands the angles of elevation of the top and bottom of the flagstaff are observed to be 60° and 45° respectively. Find the height of the top of the house above the point of observation.

8 **8.** A man standing between two towers, 200 feet from the base of the higher, which is 90 ft. high, observes their elevation to be the same. 70 ft. nearer the shorter tower he finds the elevation of one twice that of the other. Find the height of the shorter tower.

9. Attempt two questions only.

10 (*a*) A man standing on an inclined plane 112 ft. from the bottom observes the angle subtended by a building at the bottom of the incline to be 33°52′. The inclination of the plane to the horizontal is 18°51′. Find the height of the building.

10 (*b*) Two objects are separated by a building, and it is required to find the distance between them. An observation is made at a point distant 486 ft. and 620 ft. respectively from the given objects. The angle subtended at this point by the line connecting the objects is found to be 82°27′. Find the distance between the two objects.

10 (*c*) From points directly opposite on the banks of a river 500 yards wide, the mast of a ship lying between them is observed to be at an elevation of 10°28′ and 12°14′ respectively. Find the height of the mast.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

GEOMETRY.

Time—Three hours.

Values.

6 **1.** If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the straight line which bisects the angle. (A-18).

6 **2.** The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the two rectangles contained by the opposite sides. (A-20).

6 **3.** Divide a straight line so that the rectangle contained by the whole line and one segment may be equal to the square on the other segment. (A-13).

6 **4.** (*a*) Prove that triangles on the same base and with equal vertical angles are to one another as the product of the lengths of their sides.

6 (*b*) AE bisects the vertical angle of the triangle ABC and meets the base in E. If d and d' are the diameters of the circum-circles of the triangles ABE and ACE, show that $d : d' =$ BE : EC.

5 **5.** (*a*) Find the coordinates of a point which divides the straight line joining two given points in a given ratio.

5 (*b*) The straight line joining O, the origin to P(4,8) is divided at A and B so that OA : AB : BP=1 : 3 : 4. Find the length of AB.

[OVER]

Values.

5 **6.** Find the equation of a straight line in terms of the angle it makes with the axis of x and its intercept on the axis of y.

Or

5 Two lines pass through the point (2, 5), and form with the axis of x an equilateral triangle. Find the equations of the lines.

7. $x-py+q=0$ is the equation of a straight line. Find:

2 (1) the intercepts which it makes on the axis.

3 (2) two points through which this line passes.

3 (3) the length of the perpendicular from (a, b) on this line.

6 **8.** (a) Find the angle between the two straight lines $y=mx+c$ and $y=m_1x+c_1$.

Deduce the conditions of perpendicularity and parallelism.

5 (b) Find the equation of the straight line through (h, k) and parallel to the line $\frac{x}{a}+\frac{y}{b}=1$

9. Attempt *two* parts only.

5 (a) Show that the points (4,2), (6,2), $(5,2+\sqrt{3})$ are the vertices of an equilateral triangle.

5 (b) Find the equation of the right bisector of the straight line joining (—2,3) and (4,5).

5 (c) Find the equations of the straight lines which bisect the angles between the lines $12x-5y=17$ and $8x+15y=13$.

4 **10.** (a) Find the equation of the circle which touches the axis of y and whose centre is on the axis of x.

4 (b) Find the equation of the circle described on the straight line joining the origin to (a,b) as diameter.

4 **11.** (a) Find the coordinates of the centre and the radius of the circle $x^2+y^2-6x-8y=24$.

4 (b) Find the equation of the chord of the above circle which passes through (5,—1) and is bisected at that point.

5 **12.** (a) Find the equations of the tangents to the circle $x^2+y^2=a^2$ in terms of m, the slope of the tangent.

5 (b) Find the equations of the tangents to the circle $x^2+y^2=25$ which are parallel to $3x-y=0$.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

HISTORY.

Time—Two and one-half hours.

NOTE TO CANDIDATES: Candidates will answer three questions from Section A and three from Section B, one of which must be Question 5.

SECTION A.

Values.

1. "It is difficult for us to appreciate the overwhelming power of the Church at this time."—Botsford.

9 (*a*) Show in some detail the authority claimed and the powers actually wielded by the Church in the central mediaeval period.

8 (*b*) What causes subsequently brought about a decline in the power of the Church?

4 **2.** (*a*) Indicate the extent of the Spanish Empire under Philip II.

13 (*b*) What were the virtues and what the main defects of Spanish government both at home in Spain and abroad in the Empire?

3. "Europe owes much to them [the benevolent despots] for in many cases their reforms were of permanent benefit."—Botsford.

17 Estimate what of good and what of ill Europe owes to the so called benevolent or enlightened despots who ruled in the period from 1648 to 1789.

4 **4.** (*a*) In what spirit did the Congress of Vienna approach the task of re-shaping Europe after the downfall of Napoleon?

7 (*b*) Discuss critically the settlement of Europe which the Congress made.

6 (*c*) In what main ways was the Vienna settlement later overthrown or modified?

[OVER]

Values.

5. "Socialists, then, demand that these evils be abolished."—Botsford.

5 (*a*) Against what "evils" is Socialism a protest?

6 (*b*) What are the chief ideals and methods of Socialism?

6 (*c*) To what extent and in what main ways has an alleviation of abuses actually been achieved?

Or

"The classical and time-honoured basis of classification.....will not carry us very far in the modern world. In its place, or perhaps in addition to it .....we propose to assign the typical states of the modern world to three categories."—Marriott.

6 (*a*) State the classical basis of classification of states and make clear its inadequacy in our own day.

7 (*b*) Describe the three additional categories which Marriott presents.

4 (*c*) How would you classify the constitutions of the following countries: Britain, France, the United States, Canada?

16 **6.** "The actual point at issue in the great contest of the seventeenth century was—on the political side—the control of the executive."—Marriott.

Trace the struggle during the seventeenth century to assert Parliamentary control over the Executive, making clear to what extent and in what manner the struggle had succeeded by the end of the reign of Queen Anne.

10 **7.** (*a*) Trace the evolution of the office of Prime Minister, and make clear its position and powers in our own day.

6 (*b*) What rights does the personal sovereign still retain?

8. "By the Acts of 1832, 1867, 1884 and 1885, the House of Commons has been completely transformed."—Marriott.

7 (*a*) What forces or conditions caused the growth of this movement for Parliamentary reform?

9 (*b*) Outline the changes introduced by these measures and discuss their actual and possible results.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

HISTORY OF ENGLISH LITERATURE.

Time—Two and one-half hours.

Values.

8 **1.** What efforts did King Alfred make to revive the learning swept away by the Danes? What books did he write or cause to be written?

Mention the selections from these books which you have read and comment on the subject matter.

15 **2.** (*a*) In the "Field full of Folk" Langland brings together people typical of the life of his period. Enumerate the most important of these types.

(*b*) When did Langland live?

(*c*) What other poet of the same period also brings together a typical group of people? Describe the general plan of this second poem.

(*d*) Describe one of these people.

(*e*) What is the most striking difference between this description and any one of Langland's?

10 **3.** What is the importance of the following writers in the history of English Literature and to what period does each belong: Cynewulf, Surrey, Mandeville, Malory, Tyndale?

12 **4.** State definitely the importance of *each* of the following in the development of the drama:

(1) Ralph Roister Doister.
(2) Gorboduc.
(3) Gammer Gurton's Needle.
(4) The Spanish Tragedy.

[OVER]

Values.

8 **5.** What is the chief characteristic of Marlowe's dramas? Illustrate by reference to such selections from Marlowe as you have read.

8 **6.** What is the chief characteristic of Jonson's dramas? Name several of the most important and indicate how they illustrate Jonson's method.

10 **7.** (*a*) What constitute Dryden's claims to the title, "Father of English Prose"? What were his chief writings in prose? Give Dryden's approximate date.

(*b*) Into what groups with respect to form and subject-matter does Dryden's poetry fall? Name at least *one* poem in each group.

8 **8.** (*a*) Give a brief account of the literary enterprise in which Steele and Addison were associated. What work of permanent value developed from their joint authorship?

(*b*) What, briefly is Addison endeavoring to teach in "The Vision of Mirzah"?

12 **9.** (*a*) State definitely the contribution of each of the following to the development of the Romantic Movement: Collins, Cowper, Wordsworth, Coleridge, Shelley, Scott.

(*b*) What was the importance of "Lyrical Ballads"? Describe the characteristics of the poetry which it contains. When did it appear?

9 **10.** What was Stevenson's creed as a writer of Romance? In what two essays does he discuss this creed? Give briefly the subject-matter of each.

In his own writings how did Stevenson practise his creed? Illustrate from any of his books which you have read.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

ENGLISH LITERATURE.

Time—Three hours.

MACBETH.

Values.

10 **1.** "Macbeth does not project (plan for) the murder of Duncan because of his encounter with the weird sisters: the weird sisters encounter him because he has projected the murder."

Discuss this statement, supporting or refuting it by definite reference to the text.

6 **2.** Of the several murders committed by Macbeth or his agents, which take place before the eyes of the audience? Which behind the scenes? Show what dramatic purpose is served by this stage arrangement.

10 **3.** Reputable critics have taken divergent views of the character of Lady Macbeth. For example: "Lady Macbeth.....will be seen to be a passionate, great-hearted, heroic woman, a victim to her own affection; and that affection squandered upon an ambitious, vacillating, and blood-thirsty man..... She is a proud, a loving wife, absorbed in her husband's pursuits, eager to sacrifice herself utterly for the furtherance of his ambition and for the increase of his greatness."

Mrs. Siddons, an actress famous in the role of Lady Macbeth, wrote: "In this astonishing creature one sees a woman in whose bosom the passion of ambition has almost obliterated all the characteristics of human nature. .....(She is) a splendid fiend .....with vaulting ambition and intrepid daring .....and an iron heart."

Discuss these two points of view, showing by reference to the play how the character of Lady Macbeth

Values.

might be so interpreted. Make clear also your own opinion of Lady Macbeth, supporting it by definite reference to the text and by quotations.

MILTON'S MINOR POEMS.

2 **4.** (*a*) At the opening of *Lycidas*, why does Milton address Laurels, Myrtles, and Ivy? What is the "bitter constraint" and "sad occasion dear"?

2 (*b*) "Sisters of the sacred well
That from beneath the seat of Jove doth spring."
Explain the reference contained in these lines.

4 (*c*) In the passage beginning "For we were nurs't upon the self-same hill", what does the poet recall and what metaphor does he employ? Explain the passage fully.

7 **5.** What is a masque? To what extent does Milton in *Comus* follow the general conception of a masque?

SELECTED LYRICS FROM PALGRAVE AND FROM PACE.

3 **6.** There are two lines in Wordsworth's *Nature and the Poet* well known and often quoted for their exceptional beauty. What seem to you the most beautiful lines in this poem? Give your reasons.

8 **7.** Quote or paraphrase from Browning's *Rabbi Ben Ezra* some of the stanzas that show the meaning of life to be the education and maturing of the soul.

Or

Point out the reasoning by which man is shown to be allied to God rather than to the lower animals.

6 **8.** In his *Memorial Verses*, Arnold writes about two English poets. What is the substance of the lines dealing with each poet?

CARLYLE'S BURNS.

12 **9.** What does Carlyle enumerate as the qualities of most songs, and what as the qualities of Burns's songs?

Discuss fully, illustrating by quotation, paraphrase, or direct reference to the poems.

Values.

10 **10.** "The blame of his [Burns's] failure, as we have said, lies not chiefly with the world". Explain clearly to what Carlyle ascribes Burns's failure. In this regard what illustrations does he draw from the experiences of Locke, Milton and Cervantes?

RUSKIN'S CROWN OF WILD OLIVE.

12 **11.** In the lecture entitled *Work,* Ruskin discusses the characteristics of "wise work." How does he define "wise work"? Summarize fully his discussion of its characteristics.

8 **12.** (*a*) Quote *eight* consecutive lines from *one* of the following:

L'Allegro.

Il Penseroso.

Byron's Lachin Y Gair.

Wordsworth's Character of the Happy Warrior.

(*b*) Quote a passage of at least *eight* lines from a speech of Lady Macbeth or of Duncan.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

COMPOSITION.

Time—Three hours.

N.B.—Candidates should endeavor to submit papers which show neatness in form, freedom from mechanical errors and care in expression. Candidates should spend any extra time in reviewing, revising and rewriting your answers in order to secure these qualities.

Values.

8 **1.** (*a*) Point out *each* violation of good use in the following sentences and name the class of violation which *each* incorrect word or expression illustrates.

8 (*b*) Without changing the form more than is necessary, express the thought of *each* sentence in words that are used correctly.

4 (*c*) Select from the sentences *eight* incorrectly used words or expressions that have correct uses and make original sentences in which you employ *each* word or expression correctly.

(1) One characteristic of my daily life is crossing the High Level Bridge.

(2) Owing to the storm they calculated that nobody would put in an appearance, but quite a few finally showed up.

(3) He is not a strong man physically, being addicted to attacks of rheumatism.

(4) I sized up the situation right away and started out for a near-by house to get assistance.

(5) As we conversed we found we had several mutual friends in Toronto.

(6) Judging from the write-up of his latest oil deal, I expect he is a grafter.

Values.

(7) He owes a great deal, of course, to the healthy climate and the up-to-date doctor that he had.

20 **2.** "The aim of artistic or literary description is to interest and to please, and only incidentally to give information. In selecting material for artistic description one must seek only that which is sufficiently characteristic to insure its adding interest to the whole description. The art comes in the grouping of the interesting material so as to please the reader."

Following the suggestions contained in the foregoing quotation write a descriptive paragraph about twenty lines in length on *one* of the following subjects:

(*a*) A City Street on a Dusty Day.

(*b*) An Abandoned Farm.

(*c*) Caliban.

(*d*) The Village of Cranford.

(*e*) The Town Hall.

(*f*) A Schoolyard at Recess.

(*g*) My Worst Enemy.

(*h*) My Dearest Friend.

16 **3.** (*a*) Prepare a formal brief in support of the affirmative side of *one* of the following propositions:

(1) Every high school in Alberta should have a gymnasium.

(2) Cross word puzzles are more harmful than beneficial.

(3) Reports of murder trials should not be printed in the newspapers.

(4) The wearing of birds' plumage for decorative purposes should be forbidden by law.

(5) Poverty tends to develop character more than riches.

(6) Strikes should be made illegal.

(7) The study of French should be made compulsory in the high school.

4 (*b*) Write a note on refutation in which you give at least *four* points of advice to be followed by a debater in preparing his rebuttal.

Values.

40 **4.** Write an essay of at least two pages on *one* of the following subjects taken from your collateral reading:

(*a*) Ariel.

(*b*) The Restoration of Prospero.

(*c*) Ferdinand and Miranda.

(*d*) The Character of Harold.

(*e*) The Battle of Hastings.

(*f*) The House of Godwin.

(*g*) Stevenson's Camp in the Dark.

(*h*) Modestine.

(*i*) The Panic in Cranford.

(*j*) The Town and County Bank Stops Payment.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

FRENCH.

Time—Three hours.

PART I (GRAMMAR AND COMPOSITION)

Values.

1. Translate into French:

2 (*a*) That horse is said to be worth a hundred dollars, but I would not give so much for it.

2 (*b*) My father is seventy years old today; he was born in the reign of Queen Victoria.

2 (*c*) What will become of him? He is in bad health and his money is all gone.

2 (*d*) Did that little girl hurt herself badly when she fell coming out of school?

2 (*e*) The doctor gave orders that my father should go out for a drive every day.

2 (*f*) Although he paid me many compliments at first, he ended by insulting me.

2 (*g*) Do you remember the beautiful house we saw being built last year?

2 (*h*) Did you pay the tailor for the coat you are having him make for you? No, but I must not forget to.

2 (*i*) The lady whose daughter has just been married will spend some weeks with us next summer.

2 (*j*) It is more than three years since you were here. How long it seems!

15 **2.** Translate into French:

Pliny lived in Misena, a little town situated near Vesuvius (Vésuve, m.) at the time of the terrible eruption (éruption, f.) which caused the death of his uncle. The inhabitants, greatly frightened, fled in all direc-

Values.

tions. Forgetting the danger, Pliny seeks for his mother, finds her, and wishes to carry her off. His mother opposes this action as she is afraid of causing the death of her son. But Pliny will not listen to her and in spite of her entreaties (supplications, f.) carries her away. Ashes (cendre, f.) fall on them; black smoke surrounds them. But no difficulty and no danger can discourage young Pliny and very soon mother and son are in safety.

15 **3.** Write a composition in French of not less than one hundred words describing your Christmas Day, touching on such points as: when you awoke; what presents you received; what you did during the morning; a visit to a neighbour's; the Christmas dinner; the dance afterwards; etc.

PART II

(*AUTHORS AND SIGHT TRANSLATION*)

10 **1.** Translate into English:

Ces paroles m'avaient mis du baume dans le sang, et cette nuit-là je dormis comme un bienheureux. Mais le lendemain la peur me reprit: je me représentai tout à coup combien de gens criblés de défauts partaient tout de même, et combien d'autres avaient l'indélicatesse de s'en inventer pour tromper le conseil: par exemple, d'avaler des choses nuisibles, afin de se rendre pâles, ou de faire les sourds, les aveugles. les imbéciles. Et songeant à ces choses, je frémis de n'être pas assez boiteux, et je résolus d'avoir aussi l'air minable. J'avais entendu dire que le vinaigre donne des maux d'estomac, et, sans en prévenir M. Goulden, dans ma peur j'avalai tout le vinaigre qui se trouvait dans la petite burette. Ensuite je m'habillai, pensant avoir une mine de déterré, car le vinaigre était très fort. Mais, en entrant dans la chambre de M. Goulden, à peine m'eut -il vu qu'il s'écria:

"Joseph, qu'as-tu donc?"

5 (*a*) Write out the principal parts of the following verbs found in the extract:

mis; dormis; reprit; résolus; prévenir.

(*b*) Translate into French:

1 1. Joseph pretended to be sick.
1 2. M. Goulden had hardly come in.
1 3. They look like ghosts.

2 (*c*) "Joseph, qu'as-tu donc?"—why does M. Goulden ask this question?

10 **2.** Translate into English:

J'allais tourner le coin d'un hangar, lorsque, levant la tête, j'aperçus une cinquantaine d'officiers à cheval

Values.

arrêtés au haut d'une colline en face; plus loin, derrière eux, des masses d'artillerie accouraient ventre à terre sur la route de Leipzig. Cela me fit regarder, et je reconnus l'Empereur, un peu en avant des autres; il était assis, comme dans un fauteuil, sur son cheval blanc. Je le voyais très bien sous le ciel pâle; il ne bougeait pas et regardait la bataille au-dessous avec sa lunette.

Cette vue me rendit si joyeux que je me mis à crier: Vive l'Empereur! de toutes mes forces; puis j'entrai dans la grande rue de Kaya par une allée entre deux vieilles maisons. J'étais l'un des premiers, et j'aperçus encore des gens du village, hommes, femmes, enfants qui se dépêchaient d'entrer dans leurs caves.

Plusieurs personnes auxquelles j'ai raconté cela m'ont fait des reproches d'avoir couru si vite, mais je leur ai répondu que lorsque Michel Ney reculait, Joseph Bertha pouvait bien reculer aussi.

5 (*a*) Write out in full the present indicative of the following verbs occurring in the extract:
allais; accouraient; fit; reconnus; pouvait.

(*b*) Répondez en français:

1 1. Qui est "Michel Ney"?

1 2. Décrivez le portrait de l'Empereur qu'on trouve dans l'Histoire d'un Conscrit de 1813.

3 (*c*) Describe the literary collaboration of the authors of *Le Conscrit*.

10 **3.** Translate at sight into English:

Jeanne d'Arc naquit parmi ces légendes, dans ces rêveries populaires. Mais le pays offrait à côté une tout autre poésie, celle-ci, sauvage, atroce, trop réelle, hélas! la poésie de la guerre.....La guerre! ce mot seul dit toutes les émotions; ce n'est pas tous les jours sans doute l'assaut et le pillage, mais bien plutôt l'attente, le tocsin, le réveil en sursaut, et dans la plaine au loin le rouge sombre de l'incendie..... Etat terrible, mais poétique; les plus prosaiques des hommes, les Ecossais du pays bas se sont trouvés poètes parmi les hasards du border; de ce désert sinistre, qui semble encore maudit, ont pourtant germé les ballades, sauvages et vivaces fleurs.

Jeanne eut sa part dans ces romanesques aventures. Elle vit arriver les pauvres fugitifs, elle aida, la bonne fille, à les recevoir; elle leur cédait son lit et allait coucher au grenier. Ses parents furent aussi une fois obligés de s'enfuir. Puis, quand le flot des brigands fut passé, la famille revint et retrouva le village saccagé, la maison dévastée, l'église incendiée.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

LATIN.

Time—Three hours.

SECTION A (AUTHORS)

Values.

8 **1.** Translate into English:

At Hercule memoria parentum Claudium Caesarem ferunt, cum in Palatio spatiaretur audissetque clamorem, causam requisisse, cumque dictum esset recitare Nonianum, subitum recitanti inopinatumque venisse. Nunc otiosissimus quisque multo ante rogatus et identidem monitus aut non venit aut, si venit, queritur se diem perdidisse. Sed tanto magis laudandi sunt probandique quos a scribendi recitandique studio haec auditorum vel desidia vel superbia non retardat. Equidem prope nemini defui. Erant sane plerique amici; neque enim est fere quisquam qui studia, ut non simul et nos amet.

1 (*a*) *Claudium Caesarem.* Locate this Caesar in history.

1 (*b*) Give your general impression of the *recitatio,* basing your answer on Pliny's account.

8 **2.** Translate into English:

Mirum est quam singulis diebus in urbe ratio aut constet aut constare videatur, pluribus cunctaque non constet. Nam si quem interroges "Hodie quid egisti?" respondest, "Officio togae virilis interfui, sponsalia aut nuptias frequentavi, ille me ad signandum testamentum, ille in advocationem, ille in consilium rogavit." Haec quo die feceris necessaria, eadem, si quotidie fecisse te reputes, inania videntur, multo magis cum secesseris. Tunc enim subit recordatio, "Quot dies quam frigidis rebus absumpsi!"

Values.

1 (*a*) *Officio togae virilis interfui.* Explain.

1 (*b*) What is the technical meaning that *secesseris* possesses here?

8 **3.** Translate into English:

SO. Hem, quid id est? SI. Scies.
ecfertur. imus. interea inter mulieres
quae ibi aderant forte unam adspicio adulescentulam,
forma....SO. bona fortasse. SI. et voltu, Sosia,
adeo modesto, adeo venusto, ut nil supra.
quae quum mihi lamentari paeter ceteras
visa est, et quia erat forma praeter ceteras
honesta et liberali, accedo ad pedisequas;
quae sit, rogo. sororem esse aiunt Chrysidis.
percussit ilico animum. atat, hoc illud est,
hinc illae lacrimae, haec illast misericordia.
SO. Quam timeo quorsum evadas. SI. Funus interim
procedit. sequimur; ad sepulcrum venimus;
in ignem impositast; fletur. Interea haec soror,
quam dixi, ad flammam accessit imprudentius,
satis cum periclo.

1 (*a*) *Haec soror.* What name does she bear in the play? What does her real position in life turn out to be?

1 (*b*) Point out in what respects a play of this kind differs in its presentation from a play like it in our times.

8 **4.** Translate into English:

SI. Quid 'mi pater'? quasi tu huius indigeas patris,
domus, uxor, liberi, inventi invito patre.
adducti qui illam civem hinc dicant; viceris.
PA. Pater, licetne pauca? SI. Quid dices mihi?
CH. Tamen, Simo, audi. SI. Ego audium? quid audiam,
Chremes. CH. At tandem dicat. SI. Age dicat, sino.
PA. Ego me amare hanc fateor. si id peccare est, fateor id quoque.
tibi, pater, me dedo. quidvis oneris impone; impera.
vis me uxorem ducere? hanc amittere? ut potero, feram.
hoc modo te obsecro, ut ne credas a me adlegatum hunc senem.
sine me expurgem, atque illum huc coram adducam.

1 (*a*) *Domus, uxor, liberi.* What does Simo mean?

1 (*b*) *Illam civem dicant.* What is the great importance attaching to this fact?

Values.

10 **5.** Translate into English at sight:

Circenses sunt genus spectaculi quo ne levissime quidem teneor. Nihil novum, nihil varium, nihil quod semel spectasse non sufficiat. Si tamen spectatores aut velocitate equorum aut hominum arte traherentur, esset ratio non nulla; nunc favent panno, pannum amant, et si in ipso cursu medioque certamine hic color illuc, ille color huc, transferatur, studium favorque spectantium simul transibit. Tanta est gratia, tanta auctoritas in una vilissima tunica non solum apud vulgus sed apud quosdam graves homines.

Traho—to attract. Pannus—the shirt (colored) worn by the drivers in the races. Levissime—in the slightest degree.

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SECTION B (GRAMMAR AND COMPOSITION)

3 **1.** (*a*) Decline together throughout the singular
hic alter dies

2 (*b*) Decline together throughout the plural
servi fideliores

5 **2.** For each of the following nouns give the nominative singular, the genitive singular, and the gender:

certamine, corpore, mercedibus, municipis, sanitatis.

5 **3.** Give the principal parts of the verbs from which are derived the following forms:

fungi, attulit, effingit, deponas, parit.

5 **4.** Explain the following forms from the Andria of Terence:

satin, istoc, tetulit, face, mortuust.

5. Explain briefly the syntax of the *italicised* words and phrases in the following:

1 (*a*) Licet has inter Plautinas Terentianasque *numeres.*

2 (*b*) Nam vehementer intererat *vestra* qui patres *estis.*

1 (*c*) Neque enim est fere quisquam qui studia, ut non simul et nos, *amet.*

1 (*d*) Porro tanto turpius gratiam non referre quanto honestior causa *referendae.*

Values.

6. Translate into Latin:

6 (*a*) Nevertheless I permitted Catiline to go out from the city because I could not determine whether the citizens wanted him put to death.

6 (*b*) Cicero did not believe that, if a man had been accused in such bitter terms, he would dare to to remain in Rome.

6 (*c*) I shall see to it that nothing is overlooked in the senate which concerns the safety of the state.

7 (*d*) But I fear that some one may presently persuade you to free these leaders of conspiracy from prison; that they are far more deserving of being put to death than of remaining in prison, I freely (*libenter*) admit.

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HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

GERMAN.

Time—Three hours.

PART I (GRAMMAR AND COMPOSITION)

Values.

1. Translate into German:

2 (*a*) The discovery of America by Columbus was perhaps the greatest undertaking of any man or of any age.

2 (*b*) When I was going to the railway station a boy met me and handed me a telegram.

2 (*c*) We had hardly been at home half an hour when it began to rain.

2 (*d*) We were astonished to see Mr. W. on the street this morning, as we thought he was still in Ottawa.

2 (*e*) Help me to do my work and I will then help you to do your lessons.

2 (*f*) Do not allow yourself to be disturbed by my coming in; please go on writing.

2 (*g*) He says the matter is perfectly clear, but his saying so does not make any difference.

2 (*h*) The gentleman coming out of that shop is Mr. B., and the lady accompanying him is his niece, Miss K.

2 (*i*) There is no doubt that you ought to have acted differently, but it cannot be helped now.

2 (*j*) My sister is vexed at not receiving an invitation to the party which is to take place at your house tonight.

Values.

15 **2.** Translate into German:

The old hunter Moritz used to keep in his room a tame starling (Star, m.) which he had taught to speak a few words. For example, when the hunter called out: "Little starling, where are you?" the starling would always cry: "Here I am!"

A neighbour's boy, little Karl, took a great liking for the bird and often used to pay it a visit. Once when Karl came in to see it, the hunter was not at home. Karl quickly seized the bird, put it in his pocket and was on the point of sneaking away with it.

But at that very moment old Moritz came in the door. He thought he would please the boy, and as usual called out: "Little starling, where are you?" And to his surprise the starling cried out as loud as he could from the boy's pocket "Here I am!"

15 **3.** Write a composition in German of not less than one hundred words describing a motor trip to a nearby town touching on such points as: why we went; who made up the party; a picnic lunch by the roadside; weather and roads; how long the trip occupied, etc.

PART II

(*AUTHORS AND SIGHT TRANSLATION*)

10 **1.** Translate into English:

"Um Gottes willen—brennt's?" stöhnte Herr Kurzmichel und stürzte auf die Thür zu. Aber seine Frau kam ihm noch glücklich zuvor: "Kurzmichel—du wirst doch nicht—du bist— —in diesem Nichtanzuge....."

"Wahr, wahr!" entgegnete Herr Kurzmichel mit klappernden Zähnen, eilte an den Nachttisch zurück, setzte für alle Fälle seine Brille auf und machte krampfhafte Versuche, seine Tabaksdose in eine nicht vorhandene Tasche zu versenken.

"Ruhe, Kurzmichel!—in jeder Lage des Lebens Ruhe!" mahnte die Frau Verwalterin und rief nun ihrerseits durch die geschlossene Thür: "Brennt es?"

"Nein—brennen thut's nicht!" antwortete von drauszen Antons derbe Stimme, "aber der Herr Verwalter soll gleich ins Schlosz kommen!"

Frau Kurzmichel half dem Gatten in die Kleider: "Was mag's geben? was mag's nur geben?" fragte ihr Mann ein Mal ums andere, und innerlich bewegt, äuszerlich aber ruhig wie das gute Gewissen antwortete die grosze Frau: "Was soll's denn geben? Die Flanelljacke, Kurzmichel!..... Wer hätte uns etwas

Values.

vorzuwerfen? Was kann uns geschehen? Ich denke, wir stehen da! Nein! nein—ohne Flanelljacke darfst du mir nicht hinaus in die Nacht!"

3 (*a*) Indicating the auxiliary of tense give the principal parts of the following verbs found in the passage:

brennt; kann-zuvor; wirst; versenken; rief.

3 (*b*) Translate into German:

1. For my sake.
2. Help me on with my coat.
3. What has happened?

2 (*c*) Write brief explanatory notes on

1. Nichtanzuge.
2. Brennen thut's nicht.

2 (*d*) Give the genitive singular and nominative plural of the following:

Herr; Zähnen; Fälle; Schloss.

2 (*e*) What had happened just prior to the incident related in the passage?

10 **2.** Translate into English:

Ein paar Monate nach diesem Ereignisse begannen die Brüder abermals allerlei Heiratsprojekte zu schmieden.

"Du solltest doch endlich heiraten!" sagte von Zeit zu Zeit einer zu dem anderen. Sie stellten manchmal Betrachtungen über ihr Schicksal an.

"Es ist wirklich sonderbar," meinte Ludwig. "Als ich mit der Apelblü Ernst machen wollte, trat sie gerade an den Traualtar, und als wir daran dachten, jene Nichte zu unserer Hausfrau zu machen, war sie bereits seit zehn oder wie viel Jahren verheiratet, und ich müszte mich sehr irren," fügte er geheimnisvoll hinzu, "wenn sie nicht auch schon Nachkommenschaft besasz."

Friedrich bemerkte, dasz sich im Leben, mit mehr oder weniger Unterschied, doch alles wiederhole. Sie seinen einmal bestimmt, die erstaunlichten Liebesabenteuer zu haben; unter den vielen die ihnen noch bevorständen, werde sich schon dasjenige finden, das in den Hafen der Ehe führt.

Trotz dieser Voraussicht und trotz des guten Vorsatzes, ihren Stamm in Ehren zu erhalten, hat keiner der Brüder sich vermählt. Sie sind hinübergegangen, ohne einen Erben ihres Namens zu hinterlassen, und so ist denn, wie so vieles Schöne auf dieser Erde, auch das alte Geschlecht derer von Gemperlein—erlöschen.

Values.

3 (*a*) Translate into German:

1. Neither of the Gemperleins got married.
2. A few years later.
3. From week to week.

1 (*b*) seien; werde. Explain the mood.

4 (*c*) Write a note on the literary career of the writer of "Die Freiherren von Gemperlein".

10 **3.** Translate at sight into English:

Der Treue Hund.

Ein Kaufmann hatte einen Hund, der sehr wachsam und treu war. Einstmals ritt der Kaufmann von einem Markte, wo er viel Geld eingenommen hatte, nach Hause. Sein Geld hatte er in einem Mantelsacke hinter sich auf das Pferd geschnallt. Der Hund lief neben ihm her. Nach und nach wurden die Riemen locker, mit welchen der Mantelsack angebunden war, und dieser fiel herab, ohne dasz es der Kaufmann bemerkte. Der Hund aber sah es und fing an zu winseln. Der Kaufmann kehrte sich nicht daran. Da der Hund nun immer ärger bellte, so hieb ihn sein Herr einigemal mit der Peitsche, aber der treue Hund hörte nicht auf. Er sprang an das Pferd und bisz es in die Füsze, dasz es nicht weiter gehen sollte, und der Schaum stand ihm vor der Schnauze. Nun dachte der Kaufmann, sein Hund sei toll geworden. Er schosz ihn mit seiner Pistole und ritt wieder weiter. Als er noch eine Strecke geritten war, fühlte er hinter sich und erschrak, als er seinen Mantelsack vermiszte. Nun ritt er zurück und sah überall Blut von seinem Hunde. Endlich kam er dahin, wo sein Geldsack herunter gefallen war. Da lag sein treuer Hund neben dem Sacke. Er wedelte mit dem Schwanze, leckte seinem Herrn die Hand und—starb.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

PRACTICAL BOOKKEEPING AND ACCOUNTANCY.

Time—Three hours.

Values.

100 Using a purchase book, sales book, cash book with any special columns you may think useful, general journal, and ledger, enter up the following transactions, take off a Trial Balance, and prepare a Balance Sheet and a Statement of Profit and Loss.

James Brown begins business at 369 Pleasant St. on July 1st, 1924, with the following:

Building at above address valued at $30,000; Cash $30,000; a promissory note of W. S. Hancock for $2,000, dated July 1, 1924, payable in two months; a promissory note of G. G. Meade for $4,000, dated June 1, 1924, payable in two months; a promissory note of P. G. T. Beauregard for $1,000, dated June 16, 1924, payable in one month; a promissory note of W. T. Sherman for $3,000, dated May 1, 1924, payable on demand with interest. The company employs a bookkeeper at $30 a week, three clerks at $12 each, a driver at $24, a buyer at $42, and an office boy at $8.

On all goods bought or sold 2% discount for cash is allowed when payment is made at once or within 10 days. When other interest or discount is to be calculated and no rate mentioned, calculate at rate of 8% per annum.

Following are the transactions of the business:

July 2. Office furniture is bought and paid for, $1,000; office books, stationery and printing, ink, etc., $250; stamps and stamped envelopes, $30.

July 3. Goods are bought of W. S. Rosecrans, $8,000 on account of J. Hooker for cash, $6,000.

July 4. A second-hand motor truck in perfect condition is bought at a bankruptcy sale, cash, $1,000, and freight is paid on it, $130. Telephones are installed and three months' charges are paid in advance, $50. A contract is made with a daily paper to publish the advertisements of the new business for $60 a month, payable in advance. The first month's payment is made.

[OVER]

July 5. P. H. Sheridan buys goods, $1,400. Goods are bought of A. E. Burnside, cash, $12,000.

July 6. Wages are paid.

July 8. Goods are bought of J. Longstreet, $14,000.

July 9. A draft drawn on the store by W. S. Rosecrans, payable in three days, for the amount of its bill, is accepted.

July 10. A note signed by James Brown is discounted at the Merchants Bank, face $10,000, 30 days. W. T. Sherman pays his note.

July 11. Goods are bought of G. G. Meade, cash, $12,000.

July 12. The promissory note of G. G. Meade is discounted at the Merchants Bank. The acceptance of July 9 is paid.

July 13. Wages are paid. Goods are sold to G. B. McClellan on acct. $1,150.

July 15. J. E. Johnston buys goods on acct. $400.

July 16. P. G. T. Beauregard pays his promissory note due today. J. Longstreet buys goods, $1,200, and gives his note payable in 30 days.

July 17. Goods are sold to T. J. Jackson for cash, $600.

July 18. Money is borrowed on a note of James Brown for $8,000, 30 days, with interest. J. Longstreet is paid cash in full.

July 19. Insurance premium on the stock of goods is paid for one year, $200, policy No. 64,510.

July 20. Wages are paid.

July 22. The Uwantus Building Company is paid for remodelling the offices, $600. One of the remodelled offices is rented and three months' rent is received in advance, $200.

July 23. G. B. McClellan pays his bill. The winter's supply of coal is paid for, $200.

July 24. A donation to the Red Cross is made, $200. Goods are sold for cash, $2,400.

July 25. A draft on P. H. Sheridan is drawn, payable in 10 days, to the order of James Brown for the amount of his bill. A bill of the Model Company, for goods bought by Mrs. Brown, is paid, $150. J. E. Johnston pays his bill of the 15th.

July 26. The draft drawn on the 25th is returned accepted.

July 27. P. H. Sheridan's acceptance of the draft of the 25th is discounted at the Merchants Bank. Wages are paid.

July 29. Mr. Brown draws for his own use, $300.

July 30. Goods are bought of W. S. Rosecrans, $2,000.

July 31. Goods are sold to G. B. McClellan, $1,000; and to J. E. Johnston, $1,000—$450 cash paid, balance, 30 days.

The closing inventories are Mdse.—$48,353.10
Stationery— 200.

In closing the books make due allowances for all accrued items, prepaid amounts and other similar matters.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

COMMERCIAL LAW AND BUSINESS FORMS.

Time—Three hours.

Values.

10 **1.** Define each of the following:

Legal Tender, Collateral Security, Days of Grace, Voidable Contract, Ultra Vires, Valuable Consideration, Accommodation Draft, Trade Acceptance, Codicil, Hypothecation.

10 **2.** (*a*) What are the requisites of a valid contract?

(*b*) Name and describe the various classes of damages for which suit may be brought because of breach of contract.

6 **3.** What is the nature and effect of an "80% co-insurance clause" in a fire insurance policy?

12 **4.** Give illustrations of four different ways of endorsing a promissory note. Show the purpose and effect of each.

10 **5.** What is the purpose of "protesting" notes? Explain the process. Is it always necessary?

10 **6.** When is a verbal agreement binding? When not?

10 **7.** Brown and Black are partners. Brown issues notes in the firm's name, without Black's knowledge, discounts them and uses the proceeds for his own purposes. Is the firm liable? What remedy has Brown? Explain.

[OVER]

Values.

10 **8.** Draw a Power of Attorney authorizing Albert Williams to sign cheques, notes, drafts, etc., for you during your absence on holiday.

10 **9.** Browning, by will, bequeaths $10,000 to Curtis. The will is witnessed by Mrs. Curtis and Mr. Dobson. Is the will valid? State eight requisites of a valid will.

12 **10.** What is the Statute of Limitations? What is its effect, in Alberta, upon Book Accounts, Promissory Notes, Mortgages, Judgments, Bank Notes?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

STENOGRAPHY PRACTICE.

NOTE.—This paper is not for distribution. Candidates are not to see it. The examiner should read it through carefully before beginning to dictate. The rate of dictation is indicated throughout, quarter minutes being indicated by single lines and whole minutes by double lines.

The Presiding Examiner shall read the following instructions to the candidates: All candidates in Stenography will write on both parts of the paper, viz: the First and Second tests, and shall elect to write back either the first or the second test, the maximum marks for the first being 85 and for the second 100.

Fifteen seconds will be allowed between each question, and one minute between tests. After the Second Test has been completed, candidates will be allowed three minutes in which to look over their notes, and a short interval to see to the adjustment of their typewriters, insert paper and carbon for the first letter and receive the following instructions from the Examiner:

"A carbon copy is required for the first letter only. Each question is to have a separate sheet of paper. All candidates should begin transcription on the machine at the same instant, and be required to turn in both their typewritten transcription and their shorthand notes of the test selected at the expiration of forty minutes from that instant."

FIRST TEST.

Values.

12 **1.** Dear Sir:

Replying to your esteemed favor of the 28th proximo, we appreciate fully your difficulty with regard to / unsuitable machine parts supplied.

As our letter to you explained, we were aware that the goods forwarded were not strictly / in accordance with your specification. When your order was received we happened to be out of the special line, but / as your order was marked "Please rush!", we hoped to convenience you by shipping immediately from a similar line on hand. //

Values.

In accordance with instructions we have this day expressed the exact fittings required from a consignment received recently from our / factory.

Yours very truly,

(104 words).

40 **2.** Gentlemen:

There is a mistaken idea that good typewriter ribbons cannot be sold for four dollars per dozen. They can and / are. It costs less than three dollars a dozen to make the very best,—so much fabric, so much ink, and the / proper apparatus to distribute the ink properly, that is all. Nobody could make them cost more than that if he tried; / and yet, you probably pay from six dollars to nine dollars a dozen. In all probability you will get a stale // ribbon at that—one that has been on the shelf for, perhaps, six months or a year. Is it worth while? / Especially when you can get the same high grade ribbon—a Royal ribbon—right from our factory here in New York / for just four dollars a dozen, any color, black, blue, green, purple, or red Record or Copying. You are sure of a / fresh, new ribbon every time—one that is full of life and will last.

It is the same with our carbon // paper, too. You will find Royal Carbon paper at one dollar and a half per hundred sheets, equal to, or better / than what you have formerly bought at twice the price.

Both ribbons and carbon paper are made by a new process. / They won't smut,—they won't fill up the type,—they are not affected by atmospheric changes, —and they are extra durable because / the material is extra good, and the colors are guaranteed permanent. Now, honestly, would it not be good business judgment to // prove our claims with a trial order? After you have done that you will surely keep on buying.

Yours very truly, /

(276 words).

33 **3.** I say that, if you offered to let me go on these terms, I should reply: "My excellent friend, are you not / ashamed of caring so much for the making of money, and for reputation, and for honour? Will you not think or / care about wisdom, and truth, and the perfection of your soul?" And if he disputes my words, and says that he does / care about these things, I shall not forthwith release him and go away; I shall question him and cross-examine him // and test him; and if I think that he has not virtue, though he says that he has, I shall reproach / him for setting the lower value on the most important things, and a higher value on those that are of less account. / This I shall do to everyone whom I meet, young or old, citizen or stranger; but more especially to the citizens, / for they are more nearly akin to me. For, know well, God has commanded me to do so. And I think // that no bet-

ter piece of fortune has ever befallen you in Athens than my service to God. For I spend my / whole life in going about and persuading you all to give your first and chiefest care to the perfection of your souls, / and not till you have done that to think of your bodies, or your wealth; and telling you that virtue does / not come from wealth, but that wealth, and every other good thing which men have, whether in public, or in private, // comes from virtue. If then I corrupt the youth by this teaching, the mischief is great; but if any man says / that I teach anything else, he speaks falsely. (263 words.)

SECOND TEST.

Values.

30 **1.** Dear Sir:

An enquiry recently directed to our Toronto Office to ascertain the reason why they had not given us a report of / your return shipment of tires, meets with a reply that they have not received any tires, nor in fact have they received / a notice from you that a shipment had been returned.

We really are unable to understand, Mr. Brown, the unusual business methods that / you are now employing. Have we not met your demands to the very fullest extent, even though in doing so we have // sacrificed not only a great deal of extra time in carrying your account, which must be looked upon as our expense; / but have we not also sacrificed a real profit by permitting the return of the stock which you acknowledged on hand on the / occasion of the last visit of Mr. Smith?

Please understand further that our offer to accept the casings in their original wrappings, in / our letter of December 19, does not hold good forever, and it was meant to apply for the present time only. // We are not interested, to tell you the truth, in having these tires returned to us except as a means of avoiding / further unpleasantness. But if you do not attach any interest to this matter, why should we go any further out of the way / to avoid unpleasantness, much though we dislike friction between us?

If we do not hear from you by January 23, we / shall take it for granted that the correspondence is closed, and shall insist upon full settlement of the account in cash.

Yours very truly, //

(271 words).

20 **2.** Dear Sir:

I beg to acknowledge receipt of your favour of the 13th instant, informing me that the Dominion Government is considering / the advisability of appointing a Royal Commission to inquire into the needs and present equipment of the Dominion as regards Industrial training and / technical education, and into the system of methods of technical instruction prevailing

in other countries, especially in Great Britain, France, Germany, and the / United States.

I entirely agree with the view of the government to the effect that a commission of this kind might render valuable // service to the Dominion as a whole, and I have no hesitation in saying that the appointment by the federal authorities of a / commission of the character and scope suggested in your letter would meet with the approval of my government, and no exception would be / taken to such a course on any ground of jurisdiction.

Yours very truly,

(151 words).

3. Important as schooling may be, there are certain secondary things of very vital importance. It is a curious thing in life and yet true that / secondary results are frequently very desirable. Often when we strive to get a certain definite thing the most satisfactory thing is not this definite object / but is something which comes along incidentally, as it were. The unforeseen is of far greater importance than we think. Hence, education must be broad enough // to top these unseen resources of boy-life. Our training should be narrow enough to make for accurate knowledge. We are in danger just now, // I fear, of losing our sense of the value of accuracy. If they are to succeed in attaining positions of trust and responsibility, this must / become second nature to them.

One of the finest qualities in any one is the ability to see what needs to be done and doing / it without being told. A business man complained recently that it was rare that a clerk did things without being told, even when he must / have seen the need. If boys get this quality early in life it will be invaluable. A tool is left out on the lawn, // there is a board off the fence, a lock is broken, or a book is loose; the boy who tends to these things because they / need attending to, without specific instructions, is the boy who, other things being equal, is going to be in demand when he gets out into / the great world. It is this attention to the little things, this habit of observation which sees what is to be done and then does it, / that makes exceedingly useful men and women. This is the boy who will be in demand all the time and in any kind of business. // There is always room for such persons. These are boys that are usually called to come higher. Promotion awaits them. Those are the lads / who will do well in the obscure, every-day positions of life if they should be left there; and they are the ones who reach / positions of honor and trust when such are open. Hence let us urge and cultivate care and accuracy, cheer and good will, application and industry; / and these things when added to the native talent of the ordinary boy will make him a credit to himself and will add to the // glory of the common life. (405 words.)

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

CHEMISTRY.

Time—Three hours.

Values.

6 **1.** Forty cubic centimetres of oxygen are measured in a graduated tube over water. The water stands 39 mm. higher in the tube than outside of it. The temperature is 22°C, and the barometer stands at 755 mm. The pressure of water vapor at 22°C=19.7 mm. of mercury. Find the volume occupied by the gas at standard temperature and pressure. (Assume Hg 13 times density of water.)

2. Compare the elements sodium and potassium under the following headings:

2 (*a*) Physical properties.

2 (*b*) Their relative behavior on water.

6 (*c*) Sources of and *two* commercial applications of *each* of their nitrates.

3 (*d*) The commercial preparation of the carbonate of either.

5 **3.** State the conclusion you would draw from the following data: 46 grams of alcohol or 342 grams of sugar when dissolved in 1 litre of water lower its freezing point 1.9°C while 111 grams of calcium chloride dissolved in 1 litre of water lower its freezing point 5.7°C. (Gram molecular weights of alcohol, sugar and calcium chloride are respectively 46, 342 and 111.)

6 **4.** (*a*) Give an account of the importance of nitrogen (1) in nature, (2) in commerce.

4 (*b*) Describe, using a diagram, an experiment to show the action of living plants on carbon dioxide in bright sunlight.

Values.

5. Write an account of coke under the following headings:

4 (*a*) The process of making it.

4 (*b*) Its commercial importance illustrated by a statement of *four* definite uses to which it is put.

4 (*c*) The names of *any four* by-products obtained in making it and the commercial use of *any two* of them.

8 **6.** Describe, using a diagram, the lead chamber process of making sulphuric acid.

7. Write equations expressing the chemical changes which take place in the following experiments:

1 (*a*) Carbon monoxide is passed through a red hot iron tube containing ferric oxide.

2 (*b*) Chlorine is passed into a solution of sulphur dioxide in water and a solution of barium chloride is added to the resulting substance.

2 (*c*) Copper turnings are gently heated with dilute nitric acid.

2 (*d*) Strong sulphuric acid is heated with clean copper turnings.

2 (*e*) Sodium chloride is mixed with a solution of silver nitrate.

4 **8.** (*a*) Describe the method of making "copper matte" from the sulphur ores of copper.

5 (*b*) Explain, using a diagram, the electrolytic process of refining silver.

6 **9.** (*a*) Describe an experimental method of determining the order in which the following metals occur in an electromotive series: lead, zinc, copper, silver.

3 (*b*) Write equations to express the chemical changes involved in the experiments used in (*a*).

2 **10.** (*a*) Name and give the formula of an important ore of aluminum.

6 (*b*) Give an account, using a diagram, of the electrolytic method of obtaining aluminum from its ores.

2 (*c*) Name *four* characteristics of aluminum that constitute it a valuable substance for the making of cooking utensils.

Either

Values.

11. (*a*) Describe the method of making *any three* of the following substances:

3 (1) Water glass.

3 (2) Porcelain.

3 (3) Portland Cement.

3 (4) Flint Glass.

Or

3 **12.** (*a*) Distinguish clearly wrought iron, cast iron and steel.

3 (*b*) Describe the cementation process for making steel.

3 (*c*) Name *one* commercial use of *each* of the *three* substances named in (*a*) and indicate the property of the substance that determines the use you give for *each*.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

GRADE XII.

PHYSICAL SCIENCE.

Time—Three hours.

Values.

6 **1.** (*a*) Describe an experimental method of proving the validity of the equation $s=\frac{1}{2}gt^2$ when applied to a body falling under the influence of gravity.

5 (*b*) Four sailors raise an anchor by means of a capstan, the radius of which is 4 inches, and the length of the spokes 6 feet from the centre of the capstan. If each man exerts a force of 150 lbs. find the weight of the anchor.

5 **2.** (*a*) Explain the Principle of Archimedes by application of Pascal's Law to the relation between pressure and depth in a liquid.

4 (*b*) A piece of sugar weighing 32 grams is coated with 3.6 grams of wax of specific gravity .9. The weight of the whole in water is 11.6 grams. What is the specific gravity of the sugar?

3 (*c*) Explain the flow of a liquid through a siphon.

3 **3.** (*a*) By a diagram, explain the recurrence of several echoes heard under certain conditions and explain why, as they die away, they seem to recede.

4 (*b*) Why is it that in an open organ pipe all the harmonics can be produced, while in a closed pipe only the odd harmonics of a series are possible.

3 (*c*) Find the length of an air column, open or closed, resonant with E where C in the same octave =256. (v=1120 feet per sec.)

Either

Values.

6 **4.** (*a*) Explain what determines each of the following features of musical tones:
(*a*) Pitch
(*b*) Intensity
(*c*) Quality.

4 (*b*) Describe an experiment that distinguishes tones similar in pitch but different in quality.

Or

4 (*a*) What are the fundamental laws which underlie the production of notes from the transverse vibration of wires.

6 (*b*) Determine the pitch of the notes in the major diatonic scale from C to C′ where C=261 international pitch.

Either

4 **5.** (*a*) Define the following terms: thermal capacity, heat of vaporization, critical temperature, dew point.

4 (*b*) What quantity of heat is required to change 100 grams of ice at —20°C to steam at 100°C if the specific heat of ice is 0.502?

Or

8 By using diagrams, explain the fundamental principles lying behind the construction and operation of *one* of the following:
(1) Steam Engine
(2) Internal Combustion Gas Engine
(3) Refrigeration Plant.

4 **6.** (*a*) Describe Joule's famous experiment on the transformation of mechanical energy into heat. State the conclusion he reached from his work.

1

5 (*b*) A locomotive whose efficiency is 7 per cent is developing on the average 400 horse power. Find its fuel consumption per hour if the coal furnishes 14,000 B.T.U.'s of heat per pound.

5 **7.** (*a*) An object 5 cm. high is placed 30 cm. from a concave mirror of radius 20 cm. Find the position and size of the image.

3 (*b*) What are the laws of refraction of light? Name

2 *four* practical applications made of the principle of refraction of light.

Values.

4 **8.** (*a*) Give a theory that adequately accounts for the phenomenon of color as applied to natural objects.

2 (*b*) Explain the formation of color observed when the light passing through a simple convex lens
2 is caught on a screen in front of the lens. How may this effect be eliminated?

5 **9.** (*a*) By using the ionization theory, explain the electrolysis of water.

5 (*b*) Describe in a general way the structure of a lead plate storage battery and explain what takes place during the charging of the cell.

Either

3 **10.** (*a*) What are the laws governing the production of
2 induced currents? Explain self-induction.

6 (*b*) Show how the induction coil is constructed and explain the function of each of its parts.

Or

3 (*a*) Name the three factors involved in Ohm's Law and give the unit used in measuring each.

2 (*b*) Electricity is delivered at a pressure of 110 volts to a 60 watt lamp requiring .522 amperes of current. Find the resistance of the filament in the lamp.

6 (*c*) Describe the construction and explain the use made of the Wheatstone Bridge.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD,

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

TYPEWRITING.

Candidates may be allowed three minutes to glance over the first section of this paper, after which twenty minutes will be given to copy it, making carbon copies throughout the first and second sections. Candidates reaching the end of the first section before the expiration of the twenty minutes may begin paper over again. It is not expected that all candidates will complete this section in the time limit.

FIRST SECTION—SPEED.

Time—Twenty minutes.

Values.

50 **1.** If the person who wrote the book is not wiser than you, you need not read it; if he be, he will think differently from you in many respects. Very ready we are to say of a book, "How good this is—that's exactly what I think!" But the right feeling is, "How strange that is! I never thought of that before, and yet I see it is true; or if I do not now, I hope I shall, some day." But whether thus submissively or not, at least be sure that you go to the author to get at his meaning, not to find yours. Judge it afterwards if you think yourself qualified to do so; but ascertain it first. And be sure also, if the author is worth anything, that you will not get at his meaning all at once; —nay, that at his whole meaning you will not for a long time arrive in any wise. Not that he does not say what he means, and in strong words too; but he cannot say it all; and what is more strange, will not, but in a hidden way and in parable, in order that he may be sure you want it. I cannot quite see the reason of this, nor analyse that cruel reticence in the breasts of wise men which makes them always hide their deeper thought. They do not give it you by way of help, but

of reward; and will make themselves sure that you deserve it before they allow you to reach it. But it is the same with the physical type of wisdom, gold. There seems, to you and me, no reason why the electric forces of the earth should not carry whatever there is of gold within it at once to the mountain tops, so that kings and people might know that all the gold they could get was there; and without any trouble of digging, or anxiety, or chance, or waste of time, cut it away, and coin as much as they needed. But Nature does not manage it so. She puts it in little fissures in the earth, nobody knows where; you may dig long and find none; you must dig painfully to find any.

And it is just the same with men's best wisdom. When you come to a good book, you must ask yourself, "Am I inclined to work as an Australian miner would? Are my pickaxes and shovels in good order, and am I in good trim myself, my sleeves well up to the elbow, and my breath good, and my temper?" And, keeping the figure a little longer, even at a cost of tiresomeness, for it is a thoroughly useful one, the metal you are in search of being the author's mind or meaning, his words are as the rock which you have to crush and smelt in order to get at it. And your pickaxes are your own care, wit, and learning; your smelting furnace is your own thoughtful soul. Do not hope to get at any good author's meaning without those tools and that fire. Often you will need sharpest, finest chiselling, and patientest fusing, before you can gather one grain of metal.

And, therefore, first of all, I tell you earnestly and authoritatively, (I know I am right in this,) you must get into the habit of looking intensely at words, and assuring yourself of their meaning, syllable by syllable —nay, letter by letter. For though it is only by reason of the opposition of letters in the function of signs, to sounds in the function of signs, that the study of books is called "literature," and that a man versed in it is called, by the consent of nations, a man of letters instead of a man of books, or of words, you may yet connect with that accidental nomenclature this real fact,—that you might read all the books in the British Museum (if you could live long enough), and remain an utterly "illiterate," uneducated person; but if you read ten pages of a good book, letter by letter,—that is to say, with real accuracy,—you are for evermore in some measure an educated person. The entire difference between education and non-education (as regards the merely intellectual part of it), consists in this accuracy. (827 words.)

2. We must distinguish carefully between the fundamental economic instinct in which vocational courses have their tap roots and the jingling of coin in the pay envelope of unskilled or semi-skilled jobs.

It is not necessary to present evidence or argument to prove to the careful observer of business that jobs having the largest initial pay almost invariably discount the future in the immediate compensation of the worker. A large body of knowledge or skill is not required. There is no direct line of promotion. Consequently the maximum of pay for such a job is not very far above the minimum. The figure is set as accurately as possible at the amount necessary to keep the job supplied with the requisite intelligence and personality without an undue amount of labor turnover. In some instances the compensation represents in part, a penalty over and above the normal wage, that the employer must pay in order to keep monotonous and uninteresting jobs supplied with labor.

On the other hand, the pay accompanying positions that require the largest amount of preliminary training and offer the greatest possibilities for individual development and reward is, for the most part, no more than that of unskilled office work, and in some instances less. In such positions it is not necessary to discount the future in order to keep the jobs supplied with the requisite intelligence and personality. The possibilities of the future do that, and the individual accepts the responsibility of making good on the possibilities, receiving and enjoying the larger income in accordance with his growth and development. (263 words.)

SECOND SECTION—TABULATING.

Time—Eighteen minutes.

Values.

35 **3.** POPULATION AND ENROLMENT OF PUPILS OF TEN TYPICAL CANADIAN CITIES FOR THE YEARS 1911 AND 1917 WITH INCREASE PER CENT.

	Population			Pupil Enrolment		
	1911	1917	Increase per cent.	1911	1917	Increase per cent.
CALGARY	43,704	56,514	27.2	5,800	10,366	82.1
EDMONTON	30,479	56,760	86.2	5,163	11,146	115.8
HAMILTON	81,969	107,832	31.6	11,359	16,637	46.5
LONDON	46,300	55,887	20.7	8,106	10,889	34.3
MONTREAL	488,000	664,640	36.2	15,535	23,022	48.4
REGINA	30,000	40,000	33.3	2,330	4,916	110.7
ST. JOHN	42.511	45,000	6.0	7,294	7,977	9.3
TORONTO	375,538	460,526	22.3	45,294	62,908	38.8
VANCOUVER	100,401	102,500	2.1	12,094	15,421	27.6
WINNIPEG	136,035	182,848	34.3	11,885	29,310	146.7

THIRD SECTION—THEORY.

Time—Twenty-five minutes.

Values.

1. Write short notes on the following:

1 (1) Correct insertion and removal of paper.

1 (2) Use of marginal stops.

1 (3) Use of paper release lever.

1 (4) Adjustment of line spacing.

1 (5) Return of carriage.

2 (6) Centering.

3 (7) Caring for your typewriter.

5 **2.** Arrange the following, line by line, so as to form the cover of a legal document, size of paper to be the ordinary letter head size. With the exception of the lines marked (x) all lines are to be centered.

IN THE SUPREME COURT OF ALBERTA
TRIAL DIVISION
JUDICIAL DISTRICT OF CALGARY.

BETWEEN (x)

E. H. THOMPSON

Plaintiff (x)

and

BOARD OF TRUSTEES OF BOSWELL HILL SCHOOL DISTRICT OF THE PROVINCE OF ALBERTA, No. 6323, JOHN HART, ROBERT C. DOBLE, S. NORMAN DOBLE, and GORDON ADDISON.

Defendants (x)

— WRITTEN ARGUMENT —

ALLEN & FLICK (x)
BARRISTERS,
CALGARY.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

BUSINESS ENGLISH AND COMMERCIAL CORRESPONDENCE.

Time—Three Hours.

N.B.—Candidates should endeavor to submit papers which show neatness in form, freedom from mechanical errors, and care in expression. Any extra time should be spent in reviewing, revising and rewriting answers in order to secure these qualities.

Values.

13 **1.** Rewrite, correcting all errors in punctuation, spelling, form of letter, and use of words:
111315 122 st edmonton alb. dear gents duely recieved your complementary personnel refrences in your resent missive to my principle for which i kindly ask you to except my heartiest greatfulness it seems like i cant express to you how much i was effected theirby after all the prosecution i have suffered from our competitors my business will now undoubtly emprove as emigration brings settlers with there capitol amd impliments and you can depend on getting excess to all the business i can find it practical to turn your way yours respectively jno. chin.

13 **2.** A business man desires to have copies of all his correspondence available for ready reference. Explain the different ways this may be accomplished, stating the merits of each.

13 **3.** You have a customer who runs a small store at a summer resort. He usually pays promptly, but is now in arrears $125. You are aware that the season has been rainy, but you are desirous of obtaining at

[OVER]

Values.

least part of the account. Write him a suitable letter.

13 **4.** Owing to a fire which partially destroyed their store the Marshall Company, Ltd., have taken temporary quarters at 235 Eighth Ave., West. In order to hold their trade they send out a circular letter to their customers. Write the letter.

13 **5.** Write a letter to accompany your cheque for $250 part payment of your account for $628 with Wright, Worthy & Co., of Winnipeg. Excuse yourself for not remitting in full and state your desire to settle by two notes due in one month and two months respectively with interest at 8%. Ask for an early reply. Show how you would address the envelope.

35 **6.** Write an essay of approximately 500 words on any *one* of the following subjects:

(1) The Province's control of her natural resources.

(2) Seeking Eastern markets for Alberta coal.

(3) Speculation.

(4) Methods of advertising.

(5) The price of wheat.

(6) Equipment of a modern business office.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

SPELLING.

Time—One hour. *Total Value 100 Marks.*

NOTE.—Three marks will be deducted for each error in spelling.

1.

1. pernicious
2. enact
3. incomparable
4. essential
5. sinecure
6. syncope
7. sieve
8. accessible
9. remuneration
10. precocious
11. paroxysm
12. embezzle
13. miscellaneous.
14. purveyor
15. acetylene
16. dilapidated
17. despicable
18. sciatica
19. cuisine
20. efficacious
21. ineligible
22. hypothecate
23. incipient
24. peremptory
25. opulent
26. utilitarian
27. consensus
28. tangible
29. sedentary
30. oscillate
31. pertinent
32. ignominious
33. fascinate
34. coterminous
35. pleurisy
36. vitreous
37. deprecate
38. vertical
39. spurious
40. susceptible
41. phlegmatic
42. nucleus
43. corroborate
44. opaque
45. deleterious
46. challenged
47. deteriorate
48. contiguous
49. amenable
50. beneficiary.

2. Chancellor of the Exchequer. Extravagant pretentions. A supplementary estimate. Forcible restraint. Miserable incompetence. A voluntarily sworn declaration. Maliciously and slanderously circulated. The concoction is volatile and inflammable. Omissions and errors excepted. A hazardous undertaking. His clientele increased perceptibly. The rebels instituted a boycott. An itinerant vendor of effervescent beverages. Indirect aspersions or insinuations were levelled at his integrity. Intermittent rumblings preceded the eruption. Acetylene is a brilliant illuminating gas. Secure lodgment in gaol. His aim was to ameliorate unsatisfactory conditions. Transparent fabric. Documentary evidence. Presentation and protest waived.

[OVER]

3. Our obligations in this respect were greatly enhanced by the long interruption of telegraphic communication. It was our duty to believe that, if we could only know what he was prevented from saying to us, contradictions would be reconciled and language of excess accounted for. There is every presumption that like fluctuation and inconsistency crept into his words and acts as to the liberation of the country; and this, if it was so, could not but produce ruinous effects.

What sane man could admit this to be a satisfactory or wholesome state of things? Why should not they try to extricate themselves from this miserable habit, and aim at a better solution? "Just as I have seen in British colonies a combination of English, Irish, and Scotch settlers bound together in loyal obedience to the law and the Crown, and contributing to the general prosperity of the country, so I cannot conceive that there is any irreconcilable bar here in their native home to the unity and amity of the respective nations."

We solicit particularly inactive accounts. "At times like the present you doubtless accumulate a considerable surplus, which you wish to be a source of future economic stability. Such funds, in the form of our certificate of deposit payable upon demand would draw interest at the statutory rate. Throughout recent disturbed financial conditions this company was favored with the confidence of the public. In consequence, we have gained steadily and handsomely in new deposits and our institution is recognized everywhere as superior to all others in reliability, and efficient yet economical administration.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

THEORY OF BOOKKEEPING AND ACCOUNTING.

Time—Three hours.

Values.

15 **1.** Write a careful definition of each of the following:
Current Assets, Fixed Liabilities, Deferred Charges to Expense, Reserve for Bad Debts, Depreciation, Good Will, Non-operating Income, Consignment Account, Turnover, Controlling Account.

15 **2.** The Balance Sheet of Davies, Jones & McGee on September 30, 1920, is as follows:

Cash	$ 2,200.00	Notes Payable	$ 1,200.00
Notes Receivable	300.00	Accounts Payable	2,800.00
Accounts Receivable	3,800.00	G. Davies, Prop.	4,000.00
Merchandise Inventory	5,600.00	H. Jones, Prop.	2,500.00
Furniture & Fixtures	600.00	M. McGee, Prop.	3,000.00
Delivery Equipment	1,000.00		
	$13,500.00		$13,500.00

The partners decide to terminate the business. The assets are converted into cash with the following losses: accounts receivable, $200.00; merchandise inventory, $250.00; furniture and fixtures, $100.00. The liabilities are paid in full. The partners share profits and losses in proportion to their investments.

Show the journal entries necessary to close the books and pay off the partners.

10 **3.** One street railway official asserts that a certain improvement to the road should be "charged to revenue." Another maintains that it should be "charged to capital." Explain the difference, and state the principle upon which a decision should be based.

[OVER]

Values.

10 **4.** My cash book shows a balance of $184.36 at the beginning of June. It is in the Bank of Montreal. During the week I make deposits of $300 and $78.70, and issue cheques numbered 133, 134, 135 and 136 for $22.50, $6.18, $176.00 and $226.12 respectively. At the end of the week the Bank Pass Book shows all these items entered except cheques numbered 134, and 136.

Draw up a Bank Reconciliation Statement.

18 **5.** How would the following uncorrected errors affect the

(I) Profit and Loss Statement?

(II) Balance Sheet?

What journal entry would you make to correct the error in each case?

(*a*) $125 paid to send a shipment of goods to F. Williams is posted to Purchases Account instead of to F. Williams.

(*b*) $35 received from K. Smith on account has been treated as a Cash Sale.

(*c*) My note for $56 to settle my debt to J. Brown was put through as a purchase of goods on my note.

(*d*) Rent $85 due but unpaid was not entered on the books at all.

(*e*) Stationery costing $150 was purchased during the year and charged to Office Supplies account. Half of this is on hand at the end of the year but no notice of this fact has been taken.

(*f*) The inventory of merchandise on hand has been wrongly totalled to $3,124.00 and should appear as $3,234.00.

10 **6.** Explain the steps you would take to open up a set of Double Entry books for a firm which had been keeping its books by Single Entry.

12 **7.** A ledger *after being closed* for the year, shows among other assets and liabilities the following balances:

	Dr.	Cr.
Merchandise	$3,486.40	
Insurance	180.00	
Rent		$100.00
Wages		215.00
Advertising	360.00	
Organization Expense	1,000.00	

Explain the meaning of each of these Balances and the probable circumstances under which they have been created.

10 **8.** By comparing two consecutive Balance Sheets of A. M. Merchant you find that notes payable have increased 20% and that accounts payable have decreased 10%. What may this indicate in regard to the business? What information would you desire to have in order to determine for certain what is indicated?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

PENMANSHIP.

Time—Forty-five minutes.

Values.

15 **1.** Give a *line* of *each* of five different free movement exercises.

20 **2.** Write the following:

The Managers of the Crescent Benevolent Fund acknowledge the receipt of the following amounts—

A. B. Cassidy	$ 25.00
B. C. Dumfries	5.00
D. E. Farrow	3.75
G. H. Innis	9.90
J. K. Lancaster	4.55
M. N. Pilkie	8.00
O. Q. Rivers	4.85
S. T. Villy	23.40
U. V. Williamson	6.65
X. Y. Zealand	10.15
Total	$101.25

30 **3.** Write the following letter, paying particular attention to good letter form, spacing, slope, freedom and alignment.

Dear Sir:

At a meeting of the directors of the Company a few days ago, your letter was read stating that you could not accede to their request to continue as a member of the Board, for reasons which they can appreciate. I am therefore directed to inform you

[OVER]

Values.

that the following resolution was proposed and unanimously adopted: "That the thanks of the directors be conveyed to Major-General Collinson for his valuable services to the Company, especially in the capacity of chairman."

Allow me to add my personal regret that you have ceased to preside over us.

I beg to remain, my dear sir,

Yours very sincerely,

Arthur K. Johnston,
Secretary.

Major-General Collinson,
Vancouver.

35 **4.** Write a line of each of the capital and smaller letters arranged as follows:

A line of Aaa, Bbb, Ccc, Ddd, etc.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

LITERATURE (2).

(GRADE X)

Time—Two and one-half hours.

Values.

12 **1.** Show by reference to his acts in the Lay the part played by the Goblin page in advancing the story.

Or

"But no kind influence deign they shower
On Teviot's tide, and Branksome's Tower,
Till pride be quelled, and love be free."

The plot of the poem is contained in these lines. Explain what it was and show how the solution was finally worked out.

12 **2.** Describe: (*a*) How the Scotts obtained Eskdale.

(*b*) The theft of the "Mighty Book."

Or

Give an account of the life of the "Minstrel" previous to his visit to Branksome.

What provision was made for his latter days?

12 **3.** Few people, who have seen the play (The Merchant of Venice) acted, come away without a feeling of pity for Shylock.

What is it that excites this pity?

What are the two outstanding features of his character? Support your answer by reference to specific incidents, quoting where you can.

Or

Values.

Recall the incidents with which Jessica is connected and show how these are related to the general structure of the Play.

12 **4.** "The dearest friend to me, the kindest man,
The best-condition'd and unwearied spirit
In doing courtesies, and one in whom
The ancient Roman honour more appears
Than any that draws breath in Italy."

Who is thus described? Do you agree with this characterization, or do you consider the picture overdrawn? Refer to specific situations in the Play.

Or

Name six of the suitors as Nerissa "over-named" them. and give their characteristics. Point out how Shakespeare has given a national characteristic to each.

10 **5.** A writer of Shakespeare's time condemns the stage, but excepts one play "representing the greedinesse of worldly chusers and bloody mindes of usurers."

(*a*) What reasons are there for thinking that he had our play in mind?

(*b*) For what reasons would the writer except this play?

8 **6.** Complete any *four* of the following quotations:

(*a*) "O Caledonia! stern and wild"—(6 lines additional).

(*b*) "There's not the smallest orb which thou beholdest"—(5 lines additional).

(*c*) "If thou would'st view fair Melrose aright"—(5 lines additional).

(*d*) "A Palmer's amice wrapp'd him round"—(5 lines additional).

(*e*) "To bait fish withal, if it will feed nothing else" —(5 lines additional).

(*f*) "Old times were changed, old manners gone;"—(5 lines additional).

(*g*) "Mark you this, Bassanio,
The devil can cite Scripture for his purpose"—(4 lines additional).

(*h*) "The man that hath no music in himself"—(5 lines additional).

Values.

10 **7.** Name the speaker and give the circumstances under which *any five* of the following quotations are spoken:

(*a*) "Yet rest thee, God! for well I know
I ne'er shall find a nobler foe."

(*b*) "My clerk hath some good comforts too for you."

(*c*) "Despite thy arrows, and thy bow,
I'll have thee hang'd to feed the crow."

(*d*) "Unless Bellario, a learned doctor,
Come here today."

(*e*) "Man of age, thou smitest sore!"

(*f*) "Fast bind, fast find,
A proverb never stale in thrifty mind."

(*g*) "Say to your Lords of high emprize,
Who war on women and on boys."

(*h*) "For Paynim countries I have trod
And fought beneath the Cross of God."

(*i*) "I gave it to a youth,
A kind of boy, a little scrubbed boy."

12 **8.** "There is not a grander, lovelier figure than the self-wrecked, self-devoted.....in literature or history."

Of what character in "The Tale of Two Cities" were the above words written?

Relate incidents from his life which justify the adjectives—"self-wrecked" and "self-devoted".

Or

What characters in this story supply the element of humor?

Describe two scenes in which it is apparent.

12 **9.** (*a*) What were Charles Darnay's reasons for returning to France after the outbreak of the Revolution?

(*b*) Explain how his release from "La Force" was effected the first time.

(*c*) Why did Madame Defarge pursue him so relentlessly?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

GEOGRAPHY.

Time—Two and one-half hours.

Values.

16 **1.** Describe under the following headings: resources and climate, industries, people and cities, *one* of these countries: France, Italy or Japan.

14 **2.** A bushel of wheat grown in Alberta eventually reaches Liverpool. By what different routes might it be transported? Trace in detail one of these routes. Name four countries other than Canada that supply Great Britain with large quantities of wheat.

8 **3.** Distinguish between a self-governing dominion, a crown colony and a protectorate of the British Empire. Give two examples of each.

12 **4.** Name three of the chief products that are shipped to Great Britain through each of these trade centres: Hong Kong, Halifax, Bombay, Singapore, Wellington, Melbourne.

15 **5.** Account for the dissimilarity in climate between:

(*a*) The British Isles and Labrador.

(*b*) Vancouver Island and Southern Alberta.

(*c*) Northern Chile and Southern Brazil.

10 **6.** What is meant by the term, tariff? Why do nations impose tariffs? What is meant by preferential tariff? Illustrate your answer by reference to Canada.

[OVER]

Values.

15 **7.** Give the location of the chief coal areas of Canada. Compare Canada's coal resources with those of the United States and Great Britain. What kinds of coal are produced in these different countries? What problems confront Alberta coal producers in endeavoring to market their product in other provinces?

10 **8.** "Commerce in the future will centre around the Pacific Ocean, as it has centred around the Atlantic in the recent past and around the Mediterranean before that."

Discuss this statement.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

ARITHMETIC.

Time—Two and one-half hours.

NOTE.—Show outlines of all solutions.

Values.

12 **1.** The holder of a note for $600 drawn at 90 days and bearing 8% interest, discounted it at the bank 73 days later at 7%.

(*a*) What proceeds does he get?

(*b*) What rate of interest per annum does the holder actually pay for the money he gets to use?

12 **2.** What sum of money invested in 5% bonds selling at $91\frac{2}{3}$, interest payable annually, will provide for the taxes on property assessed at $45,000 when the rate is 17.5 mills on the dollar?

12 **3.** An importer buys goods in France which are invoiced to him at 48 francs the metre. Freight, duty, insurance and other expenses add $33\frac{1}{3}$% to his cost. Find to the nearest cent the price per yard at which he must sell the goods to make 10% profit on his outlay. (Calculate 1 franc=6 cents.)

12 **4.** A broker sold 10,000 lbs. of packed goods at $8\frac{1}{2}$ cents a lb. on a commission of $3\frac{1}{2}$%. He paid $19.55 for cartage and storage, and with the proceeds, less a buying commission of 2%, bought lumber at $20 a thousand feet. How much lumber did he buy?

13 **5.** A town issues debentures for $5,000 payable at the end of 5 years, interest payable annually at 7%.

[OVER]

Values.

What amount of levy is required each year to pay interest and provide a sinking fund earning 5% yearly to retire the debentures at maturity?

13 **6.** What can I pay for a mortgage of $2400 maturing in 6 years and bearing 6% interest payable annually if I desire an 8% per annum return on my investment?

13 **7.** John Brown bought goods as follows:

January 15, 1925, on 30 days' credit	$500.
February 25, 1925, on 40 days' credit	300.
March 20, 1925, on 15 days' credit	800.

He has made payments on account as follows:

February 20, 1925	$400.
March 15, 1925	500.

Find the average due date for the balance.

13 **8.** William Merchant's inventory of merchandise on January 1st, 1924, is valued at $40,000. He has $1,750.00 cash on hand, and owes liabilities of $9,350. During the year he draws $1,500. from the business for personal expenses. On January 1. 1925, the books show Cash on hand $2,850.00, Merchandise Inventory $39,750, and liabilities of $7,550.00. What are the profits of his business for the year after deducting 5% interest on Merchant's Capital investment at the beginning of the year?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS, 1925

SECOND YEAR—COMMERCIAL

RAPID CALCULATION

Time—One hour.

NOTE.—Results *only* are to be entered in the spaces provided for the purpos
on this paper.

Values.

20 **1.** Find the column totals, and the line totals and check the gran
total each way:

Tax Collections of Village.

	1918	1919	1920	1921	1922	1923	Total
July	3842.85	3551.58	3762.84	3643.91	3795.62	3847.86	
Aug.	3956.73	3764.47	3872.43	3986.14	3688.76	3946.19	
Sept.	4175.92	4281.83	4344.85	4483.71	4293.65	4396.43	
Oct.	5436.74	5365.76	5582.67	5416.18	5526.93	5678.62	
Nov.	5329.48	5472.94	5487.72	5579.13	5596.38	5683.74	
Dec.	6494.67	6543.29	6483.58	6627.73	6695.45	6793.23	
Totals							

16 **2.** Perform the multiplications, and add:

(*a*)
432× 73=
368× 94=
735× 68=
527× 75=
36× 58=
836× 92=
453× 98=
978× 27=
983×563=

Total

(*b*)
16.45× 9=
105.62× 8=
73.45×76=
9.63×54=
25.36×23=
182.37× 7=
376.15×92=
25.36×83=
481.05× 6=

Total

[OVER

Values.

10 **3.** A load of coal weighs 11,486 pounds. The empty waggon weighs 1276 pounds. Find the value of the coal at \$6.50 a ton.

6 **4.** (*a*) The bank discount on \$600 for 35 days at 7%=

6 (*b*) The amount of \$350 at the end of 2 years at 6% per annum compounded semi-annually=

6 **5.** (*a*) Catalogue price \$720 less discount of 25%, $16\frac{2}{3}$% and 10% =(net)

6 (*b*) Invoiced at \$3270 less discounts of 20%, $12\frac{1}{2}$%, and 5% =(net)

10 **6.** Simplify $\frac{4}{5}$ of $\left(\frac{1}{2} - \frac{2}{3} \text{ of } \frac{5}{8} + \frac{7}{16}\right)$=

6 **7.** (*a*) 845.36×79.867=

6 (*b*) $368.47 \div 0.0236$ to four places=

8 **8.** If £1=\$4.84 and 1 franc=5.2 cents, find in francs and centimes the value of £159 10s.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

CANADIAN HISTORY AND CIVICS.

Time—Two hours.

CANADIAN HISTORY.

Values.

1. "The French king was opposed to a government in which the people had any voice."—Duncan.

2 (*a*) Why was the French king opposed to a government in which the people had any voice?

5 (*b*) Describe concisely and in proper sequence the various forms of government which France employed in Canada.

3 (*c*) Contrast French government in Canada with our present form of government.

1 **2.** (*a*) What legislative body has enacted Canada's Constitutions since 1763?

(*b*) Discuss the Constitutional Act of 1791 under the following headings:

3 (1) Conditions leading to its enactment.

3 (2) Its leading provisions.

3 (3) Its defects.

8 **3.** Write concise notes on any *one* topic from *each* of the following groups:

(*a*) Dr. Egerton Ryerson *or* Bishop Strachan.

(*b*) Sir George Simpson *or* Lord Strathcona.

(*c*) Washington Treaty of 1871 *or* Alaskan Boundary Dispute of 1903.

(*d*) The Laurier Administration *or* the Borden Administration.

3 **4.** (*a*) Name *six* of the "Fathers of Confederation."

3 (*b*) State the attitude of each of the Provinces towards Confederation at the time when negotiations were being completed.

8 (*c*) Explain clearly the principle underlying a federal form of government and how the following problems in connection with such a union in Canada were solved:

(1) The safeguarding of Provincial rights and the prevention of friction between the Central and Provincial Governments.

(2) Interprovincial trade and customs revenue from trade with outside countries.

(3) Provincial representation in the Central Parliament.

(4) Education.

8 **5.** Explain in detail how the Canadian Pacific Railway and the Hudson's Bay Company have been important factors in western development.

CIVICS.

10 **6.** Define the following terms: dissolution, protective tariff, power of disallowance, constituency, consolidated fund of Canada.

5 **7.** (*a*) Describe the procedure followed in Canada in the selection of the Premier and his Cabinet.

3 (*b*) Why has a member of the Dominion Cabinet the right to be styled "The Honourable" or "The Right Honourable" and for how long?

2 (*c*) Why and for how long has a member of the Provincial Cabinet the right to be styled "The Honourable"?

2 **8.** (*a*) Distinguish—English Common Law, Statute Law.

4 (*b*) Name the courts of Law of the Province of Alberta and of the Dominion of Canada respectively.

5 (*c*) Describe the procedure in a Civil Suit.

10 **9.** Indicate the stages through which a Money Bill passes before it receives the final sanction of the Parliament of Canada.

Values.

9 **10.** What government or governments have jurisdiction over the following matters?

(*a*) Cadet Corps.

(*b*) School inspection.

(*c*) Police protection.

(*d*) Health.

(*e*) Banking.

(*f*) Asylums.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

FRENCH.

Time—Three hours.

Part I.

GRAMMAR AND COMPOSITION.

Values.

6 **1.** Explain with illustrative sentences the difference in the use of *avoir* and *être* as auxiliaries of tense.

10 **2.** Translate into French:

(*a*) What has he been doing?
(*b*) How long have you been here?
(*c*) Don't give him any.
(*d*) She is very cold.
(*e*) They have gone to bed.
(*f*) Having stopped eating.
(*g*) After having come.
(*h*) We ought to have spoken.
(*i*) She had entered without knocking.
(*j*) I paid ten francs for it.

3. Translate into French:

2 (*a*) The Bastille was captured on the fourteenth of July, seventeen hundred and eighty-nine.

3 (*b*) Your father must take the tickets before getting on the train which leaves at eleven minutes past three this afternoon.

2 (*c*) If the dogs were to see the cows, they would go and bring them back.

Values.

2 (*d*) Napoleon the Third died in England soon after the war between France and Germany ended.

2 (*e*) I never saw anything prettier; the landscape is beautiful.

2 (*f*) What do those statues represent? Which ones?

2 (*g*) We have just visited Montreal. The church of Notre Dame interested us very much.

3 (*h*) The gentleman of whom we were speaking has just gone out.

3 (*i*) This watch is the one I bought when I was in the city yesterday.

3 (*j*) My uncle wishes me to learn French; he believes that every Canadian should know both English and French.

10 **4.** Canada is a very large country, but unfortunately has only a small population. Canada has an excellent position, as the shortest route from Europe to the East lies across our country. The climate, while severe, is extremely healthy and the boys and girls born in this northern region (région, f.) when they grow up, become strong and vigorous (vigoureux) men and women.

Part II.

AUTHORS AND SIGHT TRANSLATION.

10 **1.** *Translate into English:*

Madame Malingear.—J'espère bien, madame, si vous devenez notre locataire, que vous nous ferez l'honneur d'assister à nos petites soirées?

Malingear. (à part).—Elle l'invite!

Madame Ratinois.—Comment donc, madame..... vous êtes mille fois trop bonne. (A part) C'est du très grand monde.

Madame Malingear.—Vous partez, madame?

Madame Ratinois.—Oui. Mais j'emporte l'espoir de revenir bientôt.....Je serais bien heureuse, croyez-le, de nouer des relations plus suivies..... plus intimes.....avec une famille aussi distinguée .....que respectable.

Madame Malingear (saluant.—Madame.....(Appelant) Baptiste! Baptiste!.....

Values.

Malingear (à part).—Baptiste!.....Où prend-elle Baptiste?

Madame Malingear (à son mari).—Est-ce que vous avez envoyé le valet de chambre en course?.....

Malingear (ahuri).—Le valet de chambre..... moi?.....Non! (A part.) Nous n'avons jamais eu de domestique mâle.

Madame Malingear.—Ces gens ne sont jamais là quand on a besoin d'eux! (Appelant.) Alexandrine! Alexandrine! (A madame Ratinois.) Je vous demande mille pardons, madame.....(Alexandrine paraît.) Reconduisez madame.....

Madame Ratinois (à part).—Quelle tenue de maison!.....Mais voudront-ils de mon Frédéric? .....(Haut.) Madame.....monsieur.....mademoiselle!.....(Sortie cérémonieuse.)

5 (*a*) Write out the principal parts of the following verbs occurring above:
devenez; ferez; êtes; revenir; prend.

3 (*b*) Translate into French:

1. I needed you.
2. What did you want with me?
3. Were you present at the concert?

10 **2.** *Translate into English:*

Madame Ratinois.—Il n'est pas question de rompre. Les Malingear sont riches.....très riches.....des gens qui ont un chasseur!

Ratinois.—Ca, je l'ai vu; sept à huit pieds.

Madame Ratinois.—Eh bien, qu'ils donnent plus! Il faut que tu reparles au père.....Il va venir?

Ratinois.—Oui.....Il faut que je reparle.....

Madame Ratinois.—Quoi! tu as l'air de ne pas comprendre?.....

Ratinois.—Si.....si.....mais c'est difficile de dire à un monsieur: "Les cent mille francs que je donne, moi, suffisent!.....mais les vôtres ne suffisent pas." C'est très difficile.

Madame Ratinois.—Bah! il est vaniteux, il faut le piquer.....le prendre par l'amour-propre..... Offre toi-même de donner quelque chose de plus..... ça le mettra sur la voie.....

Ratinois.—C'est que nous ne pouvons pas aller bien loin.....avec dix-sept mille francs de rente.

Values.

Madame Ratinois.—On propose un cadeau..... une misère.....

Ratinois.—Douze couverts d'argent. (A part.) Ceux de l'oncle Robert.

Joséphine (entrant).—Madame, c'est le maître d'hôtel de M. Chevet que vous avez fait demander....

Madame Ratinois.—Qu'il entre! (Joséphine sort.)

Ratinois.—Constance, je n'ai pas besoin de te recommander de faire les choses dignement.

Madame Ratinois.—Sois tranquille.

5 (*a*) Write out in full the past definite of the following verbs found in the extract:
Vu; va; faut; pouvons; fait.

1 (*b*) "Il n'est pas question de rompre." Explain the allusion.

(*c*) Répondez en français aux questions suivantes:

2 1. Pourquoi a-t-on fait venir le maître d'hôtel de M. Chevet?

2. Touchant quel sujet faut-il que M. Ratinois reparle à Malingear?

4 (*d*) Write a note on the literary career of the chief author of "La Poudre aux Yeux."

10 **3.** *Translate at sight into English:*

Nous arrivons trente ans trop tard. Je croyais retrouver les tentes des Indiens sur les bords de la Rivière-Rouge, et je me heurte, en descendant du train, à un poteau chargé de fils, qui n'est un produit ni du désert, ni de la forêt. Winnipeg est né d'hier et compte cent mille âmes. La Compagnie de la baie d'Hudson cédait, il y a près de cent ans, la vallée de la Rivière-Rouge à un riche seigneur écossais, lord Selkirk, qui voulait y attirer, en qualité de colons, les plus déshérités de ses compatriotes. Au mois de septembre 1811, une vingtaine de familles écossaises et irlandaises débarquaient à l'embouchure de la rivière Nelson, y passaient l'hiver dans des huttes grossièrement construites, et arrivaient, à la fin d'août de l'année suivante, après un voyage à pied de sept cent cinquante milles, au lieu choisi d'avance comme centre de la colonie.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

PHYSICAL SCIENCE.

Time—Two and one-half hours.

Values.

4 **1.** (*a*) What are *four* essentials in the production of an audible sound?

4 (*b*) State the *four* laws that govern the production of musical notes from vibrating strings.

4 (*c*) A single string 36 inches in length on a sonometer produces middle C 256. Where must the moveable bridge be placed under the string to produce the notes of the major diatonic chord?

4 **2.** (*a*) Describe the vibration of a tuning fork and explain the increase in the intensity of the note produced when the vibrating fork is pressed against a table.

2 (*b*) Account for the peculiar beating effect when two notes of nearly the same pitch are sounded side by side.

3 (*c*) Explain why, when water is poured into a long graduated vessel, the sound produced rises in pitch.

3 **3.** (*a*) What are the *three* distinguishing features of musical sounds?

6 (*b*) Explain the cause of *each* of the *three* features named in (*a*).

4 **4.** (*a*) Explain what happens to light which falls upon the following surfaces:

(1) a sheet of black carbon copying paper

Values.

(2) a sheet of oiled paper

(3) a pane of window glass

(4) a mirror of polished steel.

5 (*b*) Draw a diagram to illustrate how the eye sees the virtual image of an object in a convex mirror.

3 **5.** (*a*) Explain the phenomenon of refraction of light
5 and define the following terms: angle of incidence, angle of refraction, index of refraction, critical angle and total reflection.

2 (*b*) Give *two* clear examples of natural phenomena dependent upon the refraction of light.

5 (*c*) Locate by means of a diagram, the image of an object placed between a double convex lens and its principal focus.

8 **6.** (*a*) Trace a narrow beam of light refracted through a prism and account for the color phenomenon observed on a screen placed in the path of the beam after it has left the prism.

4 (*b*) Give an explanation for the color of red and green cloth and give experimental evidence to prove the correctness of your explanation.

3 **7.** (*a*) State *three* facts that indicate that the earth is like a sphere with a bar magnet inserted within it.

6 (*b*) Explain the terms, magnetic declination and magnetic inclination and show how these are determined for any given spot on the surface of the globe.

3 **8.** (*a*) How might you construct a good electric condenser? Of what use are condensers?

4 (*b*) What are the essentials in the construction of a
2 voltaic cell? How are polarization and local action commonly overcome in the operation of these cells?

5 (*c*) Describe the construction, using a diagram, and explain the action of an electric bell.

Values.

Either

2 **9.** (*a*) What is the magnetic field surrounding a conductor carrying a current of electricity?

2 (*b*) How could you prove the existence of this field?

3 (*c*) Describe how you might determine the direction a current is flowing by means of this magnetic field.

4 (*d*) How may the lines of force in a magnetic field be collected and intensified and made to do useful work?

Or

11 **10.** Describe the essential parts, using a diagram, to show the electrical connections, and explain the action of a direct current dynamo.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

LATIN.

Time—Three hours.

Values.

8 **1.** Translate into English:

Hic cum crebri adferrent nuntii male rem gerere Dareum premique a Scythis, Miltiades hortatus est pontis custodes ne a fortuna datam occasionem liberandae Graeciae dimitterent. Nam si cum iis copiis quas secum transportarat interiisset Dareus, non solum Europam fore tutam, sed etiam eos qui Asiam incolerent Graeci genere, liberos a Persarum futuros dominatione et periculo.

1 (*a*) Pontis. Over what was the bridge built?

1 (*b*) Eos qui Asiam incolerent. In what portion of Asia Minor would they be principally found?

8 **2.** Translate into English:

Ad hanc corporis firmitatem plura etiam animi bona accesserant. Erat enim modestus, prudens, gravis, temporibus sapienter utens, peritus belli, fortis manu, animo maximo, adeo veritatis diligens ut ne ioco quidem mentiretur. Idem continens, clemens, patiensque admirandum in modum, non solum populi sed etiam amicorum ferens iniurias, in primis commissa celans, quod interdum non minus prodest quam diserte dicere, studiosus audiendi.

1 (*a*) What acquirements of Epaminondas has Nepos already noted as peculiar from the Roman point of view?

1 (*b*) Ad hanc corporis firmitatem. What kind of physical strength had Epaminondas made it his business to seek?

Values.

8 **3.** Translate into English:

Daedalus interea, Creten longumque perosus
exilium, tactusque loci natalis amore,
clausus erat pelago. "Terras licet" inquit "et undas
obstruat, at caelum certe patet; ibimus illac;
omnia possideat, non possidet aera Minos."
Dixit et ignotas animum dimittit in artes
naturamque novat. Nam ponit in ordine pennas
a minima coeptas, longam breviore sequente,
ut clivo crevisse putes. Sic rustica quondam
fistula disparibus paulatim surgit avenis.

1 (*a*) Creten...Minos. Explain briefly the situation of Crete and the relation of Minos to the island.

1 (*b*) Sic rustica quondam. What sort of musical instrument has the poet in mind?

8 **4.** Translate into English:

Unicus anser erat minimae custodia villae,
quem dis hospitibus domini mactare parabent.
Ille celer penna tardos aetate fatigat
eluditque diu, tandemque est visus ad ipsos
confugisse deos. Superi vetuere necari,
"Di" que "sumus, meritasque luet vicinia poenas
impia" dixerunt; "vobis immunibus huius
esse mali dabitur."

1 (*a*) Vicinia...impia. What was its fault?

1 (*b*) Huius mali. What punishment was visited on the neighborhood?

10 **5.** Translate into English at sight:

Victory Goes to Pausanias's Head.

Pausanias, elatus victoria Plataeensi, maiora concupiscere coepit. Sed primum reprehensus est quod ex praeda illius proeli tripodem aureum Delphis posuisset in quo inscripta erat haec sententia: suo ductu barbaros apud Plataeas esse deletos, seque propter eam victoriam illud donum Apollini dedisse. Hos versus Lacedaemonii postea exsculpserunt, neque aliud scripserunt quam nomina earum civitatum quae proelio Plataeensi adfuerant.

Concupisco-covet. Praeda-booty. Tripus-caldron. Sententia-sentiment. Exsculpo-chisel out.

SECTION B.

1. Decline in combination throughout singular and plural:

2 (*a*) *ius commune;*

3 (*b*) *eadem classis regia.*

Values.

3 **2.** Give the *dative singular* of *magistratus, dominatio, mos,* and the *ablative singular* of *gens, res, exercitus.*

3. Give the other degrees of comparison for

3 (*a*) *summus, magnus, aeger;*

3 (*b*) *diutius, felicissime, multum.*

4 **4.** (*a*) Write the complete declension of *hic,* singular and plural, all genders.

1 (*b*) Give the genitive singular and the dative plural of *ego.*

1 (*c*) Give the genitive singular and the ablative singu- of the reflexive of the third person.

8 **5.** Give the principal parts of the verbs from which are derived the following forms:

deterrerentur, rediret, discessisset, acceperunt, posset, est nactus, committerent, intellegi.

5 **6.** Write the following verb forms:

(*a*) of *laudo* the genitive plural of the present participle;

(*b*) of *perterreo* the third singular future indicative passive;

(*c*) of *dedo* the third plural perfect indicative active;

(*d*) of *audio* the first plural future indicative active;

(*e*) of *fero* the present infinitive passive.

7. Translate into Latin:

4 (*a*) They will march into the territory of the Germans in order to seize their chief men.

4 (*b*) The general said that the tenth legion would not return before the end of the year.

4 (*c*) When the Gauls had been subdued (*paco,* 1) Caesar decided to return to Rome.

5 **8.** Give the derivation of depopulate, juvenile, fugitive, intervene, egotism, and write a brief English sentence to illustrate the correct use of each.

50

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

ENGLISH GRAMMAR.

Time—Two and one-half hours.

Values.

1. "My debts to Roderick's house I know:
All that a mother could bestow
To Lady Margaret's care I owe,
Since *first,* an orphan in the wild,
She sorrowed o'er her sister's child;
To her brave chieftain son, from ire
Of Scotland's king who shrouds my sire,
A deeper, *holier* debt is owed;
And, could I *pay* it with my blood,
Allan! Sir Roderick should command
My blood, my life,—but not my hand.
Rather will Ellen Douglas dwell
A *votaress* in Maronnan's cell;
Rather through realms beyond the sea,
Seeking the world's cold charity,
Where ne'er was spoke a Scottish word,
And ne'er the name of Douglas heard,
An outcast pilgrim will she rove,
Than wed the man she cannot love."

28 Pick out the clauses in the above passage and tell their kind and relation.

12 **2.** Parse the words italicised in the above passage.

3. Analyse the following sentences into their component parts, viz., bare subject, enlargements, bare predicate, etc.

3 (*a*) The moon on the breast of the new-fallen snow
Gave the lustre of mid-day to objects below.

3 (*b*) Then doth thy sweet and quiet eye
Look through its fringes to the sky.

Values.

4 (*c*) The good Queen,
Repentant of the word.....
And saddening in her childless castle, sent,
Between the increscent and decrescent moon,
Arms for her son.

10 **4.** Parse the italicised words in the following, giving the exact case-use of each:—

(1) *Friends,* help me in this *task.*

(2) I shall pay the *baker* his *account.*

(3) He was given a *token* of our esteem.

(4) The speedway is ten *miles* long.

(5) Lincoln, America's greatest *President,* was a *man* of humble birth.

(6) *John's* friends elected him *chairman.*

1 **5.** (*a*) State the general rule for expressing the degrees of comparison of adjectives.

4 (*b*) Write the comparative and superlative degrees of sweet, wonderful, little, bad.

5 (*c*) Write sentences illustrating respectively the following classes of adjectives:—

(1) Interrogative. (2) Indefinite comparative.

(3) Demonstrative. (4) Indefinite distributive.

(5) Appositive.

10 **6.** State the kind, function and relation of each infinitive in the following:—

(1) He waited to see the doctor.

(2) The doctor had expected him to wait.

(3) Criticising others pleased him, but he disliked being criticised.

(4) She does nothing except worry.

(5) He is fond of changing his address and is always on the look-out for the sign, "Room to Let".

(6) To meet his obligations should be a man's first care, and every honest man desires to do this.

(7) You are to blame.

2 **7.** (*a*) In what respect are prepositions and conjunctions alike? What extra function does the preposition perform?

5 (*b*) Construct sentences containing the following words each followed by the preposition which harmonizes with its composition: accord, per-

Values.

tinent, addicted, associated, beware, desist, incidental, typical, synonymous, relevant.

3 (*c*) Pick out the conjunctions in the following sentences. Classify and sub-classify them.

(1) You knew this, nevertheless you persisted.

(2) He worked so hard that his health failed.

(3) Don't count your chickens till they are hatched.

(4) We eat that we may live.

(5) A man has no more religion than he acts out in his life.

(6) I have no money, whereas my friends have plenty of it.

3 **8.** (*a*) Supply the proper form, "who" or "whom" in the following, giving the reason for your choice in each case:

(1) He feels contempt for those.....he imagines are poor.

(2) We met a man.....we all thought to be your brother.

(3) Speculation was rife as to.....would be the lady of his choice.

2 (*b*) Fill each blank with the proper possessive adjective:

(1) Each of the women had.....knitting.

(2) Every one has expressed.....opinion.

(3) Either Smith or Robertson will sell..... farm.

(4) All the shareholders but one expressed .....approval.

5 (*c*) Supply the proper form, "shall" or "will" in the following, giving the reason for your choice in each case:

(1) If that is the train I fear we.....miss it.

(2) How.....you proceed with this work?

(3) We are determined that you.....come.

(4) My word is law and he.....not do it.

(5) I most certainly.....not permit this.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

CHEMISTRY.

Time—Two and one-half hours.

Values.

1. Steam is passed through an iron tube containing iron filings. The tube is heated to redness in a charcoal furnace and the gas formed is collected over water.

2 (*a*) Write the equation which expresses the chemical changes which take place.

4 (*b*) Describe experiments to illustrate two important properties of the gas given off.

4 (*c*) Describe an experiment that illustrates the reducing action of Hydrogen.

2 **2.** (*a*) What two conditions are necessary in order that air may be changed from a gas to a liquid?

2 (*b*) State the law of conservation of properties.

2 (*c*) What is meant by saying that a solution of a salt is homogeneous?

6 **3.** Describe in detail an experiment to show the percentage of oxygen in a given sample of pure mercuric oxide.

2 **4.** (*a*) State Charles's Law.

6 (*b*) A long graduated tube is filled with mercury and inverted in a vessel of mercury. Hydrogen gas is passed into the tube until the top of the column of mercury stands 25 cm. higher in the tube than the surface of the mercury in the vessel outside. The volume of gas in the tube is 40 cc. The temperature of the room

Values.

is 15°C and the barometer stands at 750 mm. If the temperature is raised to 25°C and the volume is kept constant by raising or lowering the tube, find the pressure on the gas.

6 **5.** (*a*) Write molecular formulae for the chlorides of potassium, nitrogen and phosphorus; the sulphites of silver, calcium and lead; the nitrites of zinc, copper and mercury; the oxides of sulphur, magnesium and manganese.

4 (*b*) Write chemical names for the following: $HClO_2$, H_3PO_4, HNO_2, $KClO$, $HgCl$, $Ca_3(PO_4)_2$, $Zn(OH)_2$, $Pb(ClO_4)_2$.

5 **6.** (*a*) Describe a laboratory method for the preparation of hydrogen chloride.

2 (*b*) Express the chemical changes which take place in (*a*) by an equation.

2 (*c*) A jar of hydrogen chloride gas is inverted in a vessel of cold water. State what happens.

4 (*d*) Write a brief account of two commercial uses of chlorine.

3 **7.** (*a*) Name *three* allotropic forms of carbon and state one distinctive property of each.

3 (*b*) Describe a method of preparing pure carbon from granulated sugar.

3 (*c*) Outline the method by which Moissan converted carbon into small diamonds.

8 **8.** (*a*) Describe, using a diagram, the commercial method for the preparation of coal gas.

3 (*b*) Name *three* important by-products obtained in the preparation of coal gas.

6 **9.** (*a*) Describe, using a diagram, Frasch's method for mining sulphur.

(*b*) Write equations expressing the chemical changes which take place in the following:

2 (1) Chlorine gas is passed into a jar of sulphuretted hydrogen gas.

4 (2) Copper turnings and strong sulphuric acid are heated together in a glass flask. (Two equations.)

Values.

Either

6 **10.** (*a*) Show the importance of Chili saltpetre by giving a brief account of three of its commercial applications.

2 (*b*) Write the equation expressing the chemical change when ordinary saltpetre is made from Chili saltpetre.

3 (*c*) Name *three* common properties of all nitrates.

4 (*d*) Describe *two* of the commercial uses of ammonia.

Or

6 **11.** (*a*) Describe *three* commercial applications of nitric acid.

(*b*) Clean copper turnings and dilute nitric acid are heated gently in a florence flask and a large jar of the gas is collected over water. The jar is left mouth downwards in the water and oxygen gas is slowly bubbled into it.

2 (1) Write the equation expressing the chemical action which takes place.

2 (2) State *two* definite changes which take place when the oxygen mixes with the gas.

2 (3) Write the equation expressing the reaction between the gas and oxygen.

3 (*c*) Give an example of the formation of a salt insoluble in the solution of another salt formed at the same time. Write the equation.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

GENERAL AND CANADIAN CONSTITUTIONAL HISTORY.

Time—Two and one-half hours.

NOTE TO CANDIDATES: Candidates will answer three questions from Section A and three from Section B, one of which must be Question 5.

SECTION A.

Values.

1. What were the chief contributions to scientific progress made by—

4 (*a*) The Egyptians?

6 (*b*) The Babylonians?

7 (*c*) The Greeks?

17 **2.** "They [the Athenians] developed the art of self-government more highly than any other Greek state."—Botsford.

Outline the development of Athenian self-government to the death of Pericles, making clear the good qualities and the defects of the Athenian constitution in his day.

3. Trace the growth of Roman civilisation to the time of Augustus under the following headings:

4 (*a*) Education.

4 (*b*) Literature.

4 (*c*) Religion.

2 (*d*) The treatment of disease.

3 (*e*) Public works.

[OVER]

Values.

17 **4.** Sketch the spread and organization of Christianity to the time of Gregory the Great.

SECTION B.

2 **5.** (*a*) Make clear the distinction between a "federal" form of government like that of Canada and a "legislative" union like that of Britain.

8 (*b*) What were the causes of Canadian Confederation and the main steps by which it was achieved?

7 (*c*) Trace the expansion of the Canadian Confederation subsequent to 1867, noting the terms on which additions of territory were acquired.

16 **6.** State and compare the sources of revenue at the disposal of the Dominion, Provincial, and Municipal governments respectively. What grave problem has been making itself felt in connection with the taxing powers of these three governments?

16 **7.** Give a careful account of the method of holding a general election in Canada from the issuing of the writs to the appearance of the names of newly elected members in the Canada Gazette.

8. Write notes on *four* of the following:

4 (*a*) The Imperial Conference.

4 (*b*) The powers of veto, reserve and disallowance.

4 (*c*) Juvenile courts.

4 (*d*) The budget.

4 (*e*) The paper currency of Canada.

4 (*f*) The Justices of the Peace.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

ENGLISH LITERATURE.

Time—Three hours.

JULIUS CAESAR.

Values.

12 **1.** "Caesar is presented only in his decline. It is his arrogance, vacillation, and superstition, his physical weakness and defects of temper, that are dwelt on and emphasized, and not his greatness. While Brutus, visionary idealist that he is, and fatally attended by error in all his political acts, is generous, large of soul, and truly heroic."

Schelling. Elizabethan Drama.

Upon what evidence afforded by the play is this statement based? Answer in detail.

11 **2.** Discuss in detail the actions of the common people from point to point in the opening scene and the "oration" scene and state what you conceive to have been the dramatist's purpose in thus characterizing the "mob."

9 **3.** Enumerate the successive steps by which the "revenging" of Caesar is accomplished.

THE PASSING OF ARTHUR.

4. Then spake the King: "My house hath been my doom.
But call not thou this traitor of my house
Who hath but dwelt beneath one roof with me.
My house are rather they who sware my vows,
Yea, even while they brake them, own'd me king."

6 (*a*) Explain fully what the King means.

2 (*b*) Give the grammatical relation of "this traitor" and account for the form of the verb "are".

Values.

7 **5.** Early in the poem Arthur says, "I pass, but shall not die". What later statements seem to contradict this? How do you reconcile the contradiction?

PALGRAVE: THE GOLDEN TREASURY.

5 **6.** (*a*) How does the West Wind become a symbol of Shelley's own desires?

3 (*b*) "Thine *azure sister of the Spring* shall blow
Her *clarion* o'er the *dreaming* earth, and fill
(*Driving sweet buds like flocks to feed in air*)
With living hues and odours plain and hill:
Wild spirit, which art moving everywhere;
Destroyer and Preserver: Hear, oh Hear!"

Explain words and phrases in italics.

6 **7.** What does Byron mean ("Eternal Spirit of the chainless mind") by saying that Liberty is "brightest in dungeons", and how does he amplify the idea?

8 **8.** (*a*) Quote the first two stanzas of "Of a' the airts the wind can blow"

OR

The passage from the *Ode to Evening* beginning "Now air is hush'd" and ending "Prepare thy shadowy car,"

OR

Any *sixteen* lines from Wordsworth.

(*b*) Quote a passage of at least *eight* lines from a speech of Antony or of Brutus.

VICAR OF WAKEFIELD.

12 **9.** "His delight in exhibiting a good man unmoved by adversity led Goldsmith to multiply misfortunes upon the head of the ill-starred Vicar, until, when he came to the end, he found he had raised more troubles than he could lay."

Discuss this statement, noting in order the misfortunes referred to and the author's attempt to lay the troubles.

10 **10.** From Clive's successive visits to India Macaulay dates three permanent gains to England. What were these gains? Discuss each point briefly, but sufficiently to establish the point.

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

AGRICULTURE.

Time—Two and one-half hours.

Values.

4 **1.** (*a*) Show how hybridization might be used to produce a new variety of wheat.

6 (*b*) Name *two* varieties of wheat grown in Alberta and state *two* qualities of each which make them suitable as grain crops.

4 **2.** (*a*) Using a diagram, show and name the regions found within the seed of corn (maize).

4 (*b*) Explain the function of *each* region within the seed as it bears on the life history of the plant.

3 (*c*) Give *three* reasons for growing corn in Alberta.

2 **3.** (*a*) Name *four* plants valuable in the making of a shelter belt on an Alberta farm.

3 (*b*) Name and explain *three* advantages of a shelter belt.

5 (*c*) Outline the preparation of the soil and the subsequent care necessary in the growing of a satisfactory shelter belt.

4 **4.** (*a*) Describe the propagation of currant plants. Use diagrams.

4 (*b*) How might new varieties of currants be produced from currant plants already growing in the garden?

5. (*a*) Describe *either* Wild Oats *or* Russian Thistle under the headings:

1 Appearance.

2 Control measures.

[OVER]

Values.

2 Difficulties in their control.

2 Special Harmfulness.

1 Economic Value (if any).

6 (*b*) Show *three* ways in which (1) weeds deteriorate the farm (2) weed seeds in grain lower the returns in marketing.

Either

4 **6.** (*a*) Describe the life history of Black Knot.

2 (*b*) What preventative measures should be adopted where there is danger of possible infection?

Or

4 (*a*) Outline the life history of the tent caterpillar.

2 (*b*) Account for the fact that it has gotten out of control in Alberta.

2 **7.** (*a*) Explain how sand soils have been formed.

6 (*b*) Describe *two* experiments that account for clay soils having such a superior moisture-holding capacity.

3 (*c*) Why is it that in irrigated soils there is a tendency for the upper layer to become strongly "Alkali"?

4 **8.** (*a*) Describe an experiment to show that capillarity is an active force in soil.

4 (*b*) Give *two* reasons to explain why wet soils are apt to be cool.

8 **9.** (*a*) State clearly how you might increase the following constituents of a soil for useable purposes:

(1) Nitrogen.

(2) Phosphorus.

(3) Potassium.

(4) Calcium.

2 (*b*) What part does potash play in plant economy?

1 (*c*) Name a crop that is heavily exhaustive on the phosphorus content of a soil.

1 (*d*) What is the function of lime in a soil?

4 **10.** (*a*) Show the need for various types of rations in feeding cattle.

4 (*b*) Outline a good feeding system for dairy cattle.

2 (*c*) Give the general characteristics of the dairy breeds.

100

Values.

9 **11.** What effects of the rapid accumulation of wealth are pictured by Macaulay in the "new class of Englishmen to whom their countrymen give the name of Nabobs"?

Show how the feeling against the English Nabobs affected the public attitude toward Clive.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

BRITISH HISTORY.

Time—Two and one-half hours.

NOTE TO CANDIDATES: Candidates will answer *seven* questions only, two to be selected from Section A, two from Section B, and three from Section C—one of which must be Question 10.

SECTION A.

Values.

1. "With all his crimes, yet he [Henry VIII] was one of the most glorious princes of his time."—Mowat.

16 What were the chief crimes and what the principal achievements of this sovereign?

2. "The romance of Elizabeth's reign is on the sea." —Mowat.

16 Give an account of the exploits of Elizabethan seamanship.

3. Discuss:

4 (*a*) The foreign policy of James I.

12 (*b*) His relations with Parliament.

SECTION B.

4. Give an account of the following features of the reign of Charles II:

7 (*a*) The growth of Nonconformity and the Clarendon Code.

9 (*b*) The maritime struggle with the Dutch.

[OVER]

Values.

5. "As far as England was concerned, the War of the Spanish Succession was fought in three "theatres". The first was in the Low Countries (with an extension in 1704 into Bavaria); the second was in Spain; the third was on the sea."—Mowat.

5 (*a*) What issues were involved in this great struggle?

11 (*b*) Give an account of the conduct of the war in the three "theatres" mentioned above, making clear what were the deciding factors and events.

6. "Such was George's theory, and as soon as he came to the throne he began to put it into practice." —Mowat.

3 (*a*) What was George III's theory of government?

7 (*b*) Show how he succeeded in putting it into practice.

6 (*c*) Estimate the results of his practice of this theory.

SECTION C.

5 **7.** (*a*) Describe the representative system in England prior to the passage of the Reform Bill of 1832.

6 (*b*) Sketch the progress of the reform movement up to the passage of that measure.

5 (*c*) What changes did the Reform Act make?

8. "In the reigns of George IV and William IV English literature, which had risen so high in the Napoleonic Wars, maintained its full brilliancy."—Mowat.

16 Give an account of the literary achievements of the late eighteenth and early nineteenth centuries in Britain.

16 **9.** Outline the main features of Britain's foreign policy from 1878 to the outbreak of the Great War.

10. Write a note on *one* of the following:

4 (*a*) The Instrument of Government,

4 (*b*) Trafalgar,

4 (*c*) Cecil Rhodes.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

GEOMETRY.

Time—Three hours.

Values.

7 **1.** (*a*) *Enunciate* and *prove* any *one* of the theorems that lead to the complete equality (congruency) of two triangles.

4 (*b*) Establish through proof the size of each interior angle of a regular *n*-sided polygon.

6 **2.** ABC is a right angled triangle, right angle at C. CM is the median, CS the bisector of the angle C, CL the perpendicular to the hypotenuse. Prove that CS bisects the angle MCL.

7 **3.** (*a*) The complements of the parallelogram about the diagonal of any parallelogram are equal in area. II-10.

6 (*b*) ABCD is a parallelogram, AMN a straight line meeting the sides BC in M and DC produced in N. Prove that the triangle MBN is equal in area to the triangle MDC.

8 **4.** (*a*) If the ratios of the three sides of one triangle to the three sides of another triangle, taken in order, be equal, the triangles are equiangular. III-6.

2 (*b*) State the converse of (*a*).

6 **5.** The sides AB and AC of a triangle ABC are produced to points D and E so that DE is always parallel to BC. Find the locus of a point F which divides DE so that DF : FE=BD : CE.

[OVER]

Values.

7 **6.** To divide a given straight line similarly to a given straight line. III-9.

4 **7.** (*a*) A triangle is divided by a straight line parallel to the base into two parts, the areas of which are as 1 to 8. In what ratio does this line divide the sides? Explain.

4 (*b*) In any quadrilateral prove that the sum of the squares on the diagonals is twice the sum of the squares on the straight lines joining the middle points of opposite sides.

7 **8.** (*a*) The angle at the centre of a circle is double of any angle at the circumference, standing on the same arc. IV-5.

4 (*b*) Enunciate three theorems, the proofs of which depend upon the theorem stated in (*a*).

7 **9.** (*a*) If two chords of a circle intersect without the circle, prove that the rectangles contained by their segments are equal and each rectangle is equal to the square on the tangent from the point of intersection. IV-20.

6 (*b*) Find the greatest distance at which a ship may be seen by a man standing on a promontory 528 feet high. (Radius of earth=4,000 miles.)

7 **10.** If AC be drawn from A to a point C in the base of the triangle ABD, so that ABD and ACD are similar triangles, show that DA is a tangent to the circle described about the $\triangle$ ABC.

8 **11.** Describe a rectilineal figure which shall be similar to one and equal to another given rectilineal figure. V-6.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

COMPOSITION.

Time—Three hours.

N.B.—Candidates should endeavor to submit papers which show neatness in form, freedom from mechanical errors, and care in expression. Candidates should spend any extra time in reviewing, revising and rewriting answers in order to secure these qualities.

Values.

1. The following sentences contain words or expressions which violate good use.

12 (*a*) Without changing the form more than is necessary express the thought of *each* sentence correctly.

8 (*b*) Select from the sentences *eight* examples of "impropriety" in the choice of words. Use *each* selected word correctly in a sentence which will show without doubt that you know what the proper meaning of the word is.

(1) She was awfully put out because no one alluded to what had transpired.

(2) I think it was real mean of them not to accept of my explanation, anyways.

(3) I disremember whether he died with the influenza or with the pneumonia.

(4) While I was stopping with my aunt in the country, I met a very unique old party.

(5) The teacher found it a hard proposition to learn Stubbs any Spanish.

(6) Myrtle and myself always take in everything in the motion-picture line.

(7) During January and February I most froze, but I found the balance of the winter warmer.

Values.

(8) His wife seemed deeply effected when the doctor told her that her husband was in a bad shape.

(9) One of the daughters took vocal quite a while, and spent a sight of money, but she rarely ever sings in public.

2. "Immediately there appeared, coming slowly up above the bulkhead of the cabin, another bulkhead —human, and very large—with one stationary eye in the mahogany face, and one movable one, on the principle of some lighthouses. This head was decorated with shaggy hair, like oakum, which had no governing inclination towards the north, east, west or south, but inclined to every point upon it. The head was followed by a perfect desert of chin, and by a shirt-collar and neckerchief, and by a dreadnaught pilot-coat, and by a pair of dreadnaught pilot-trousers, whereof the waistband was so broad and high that it became a substitute for a waistcoat, being ornamented near the wearer's breast-bone with some massive wooden buttons, like backgammon men. As the lower portions of these pantaloons became revealed Bunsby stood confessed, his hands in their pockets, which were of vast size, and his gaze directed, not at Captain Cuttle or the ladies, but to the mast-head."

2 (*a*) Name the *four* main kinds of prose composition and state to which class the above paragraph belongs.

2 (*b*) What test would you apply to a paragraph to determine whether it possesses unity?

2 (*c*) Apply your test to the foregoing paragraph and draw your conclusion. Give reasons for your answer.

2 (*d*) What particular method has the author followed in order to secure coherence?

4 (*e*) Point out *four* devices, other than the choice of words, used to secure emphasis.

3 (*f*) Select from the paragraph *six* words or phrases that you consider particularly suited to the author's purpose and explain clearly why you consider them effective.

5 (*g*) In a paragraph of six or seven lines give your impression of the character of Bunsby.

20 **3.** (In answering this question candidates are required to use fictitious names and addresses.)

Values.

Write a letter of application, about twenty lines in length, in reply to *one* of the following advertisements. Bear in mind that the advertiser, in the first place, has nothing but your letter on which to base his decision as to your probable fitness for the position.

Wanted: A high school girl who writes a good hand and can spell correctly, to do clerical work afternoons and Saturdays. Apply by letter to J. D. Flynn, 86 Miles Building, Vancouver.

Wanted: Young man about 18 years of age in an insurance office—stenography and accounting—two years in high school and commercial course desirable. Address, giving references, J. C. McNair, 43 Main St., Winnipeg.

40 **4.** Write an essay, at least two pages in length, choosing as your theme *one* of the following subjects taken from your supplementary reading:

(*a*) Goldsmith's Travels on the Continent.

(*b*) The Vanity of Goldsmith.

(*c*) Goldsmith Burns the Candle at Both Ends.

(*d*) Lord Mohun.

(*e*) Richard Steele.

(*f*) The Esmonds Entertain James the Third.

(*g*) Henry Esmond takes Part in a Duel.

(*h*) A Fool and a Woman (the story of Beatrix and Henry Esmond).

(*i*) Auburn, as Goldsmith Saw it after its Desertion.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

ALGEBRA.

Time—Three hours.

Values.

5 **1.** Find the value of $(\sqrt{7}+3\sqrt{2}-\sqrt{3})^2$.

5 **2.** Solve $\sqrt{9+2x}-\sqrt{2x}=\dfrac{5}{\sqrt{9+2x}}$

2 Verify the root.

6 **3.** Simplify:

$$3a^{\frac{2}{3}}\ b^{\frac{1}{2}} \times 4a^{\frac{1}{6}}\ b^{\frac{5}{6}}\ ;\quad \frac{2a^{-2}}{a^{-\frac{3}{2}}} \times \left(\frac{8}{27}\right)^{-\frac{1}{3}}\ ;\quad \sqrt[4]{x^n} \times \sqrt[3]{x^n} \div \sqrt[12]{x^{5n}}.$$

7 **4.** Find an equation whose roots are five times as large as the roots of $22x^2+10x+1=0$.

9 **5.** Find the equation whose roots are the reciprocals of the roots of $mx^2+nx+K=0$.

7 **6.** Solve:

$$3x^{-\frac{1}{2}} + 5y^{-\frac{1}{2}} = 19.$$

$$7x^{-\frac{1}{2}} - 9y^{-\frac{1}{2}} = 3.$$

7 **7.** Solve: $x^3+y^3=637$

$$x+y = 13$$

[OVER]

Values.

5 **8.** If $a : b = b : c$ prove $a^2+ab : b^2=b^2+bc : c^2$.

7 **9.** The ratio of the area of a rectangle to the area of the square described on its diagonal is 12 : 25. Find the ratio of the sides.

5 **10.** Factor completely: $(x+y)^4-a^4$.

5 **11.** Factor completely: $2x^4+8$.

5 **12.** Factor completely: $2a^3+3a^2b^2+4ab+6b^3$.

5 **13.** Factor completely: x^3+4x^2+2x-1.

10 **14.** The dimensions of a picture inside the frame are 12 and 16 inches. What is the width of the frame if its area is 288 square inches?

10 **15.** Find by graphical solution the roots of the simultaneous equations:

$$x^2+y^2-4x=0$$

$$2x+3y=6.$$

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

UNIVERSITY MATRICULATION EXAMINATION

MAY, 1925

ARITHMETIC.

Time—Three hours.

Values.

12 **1.** A wholesale merchant bought goods listed at $2500, getting successive discounts of 20%, 10% and 5%. He sold the goods at once for 20% above the net cost, taking in payment a note at 60 days bearing interest at 8% per annum. He immediately discounted the note at the bank at 8% and paid for the goods. Find his profit.

8 **2.** Washington is in 77°3′ west longitude, and Pekin is in 116°29′ east longitude. When it is 9.30 P.M. true time on Tuesday, December 31st, 1901, at Washington, what is the time of day (true time), the day of the week and the date at Pekin?

4 4 **3.** Divide .8487432 by .075637 and multiply the quotient by .835642, using contracted methods to get results correct to four decimal places.

10 **4.** A and B formed a partnership with a capital of $12000, the former putting in 60% and the latter 40% of the amount. At the end of four months A withdrew $12\frac{1}{2}$% of his investment, and at the end of nine months B increased his investment by $16\frac{2}{3}$%. How should a profit of $6960 be divided at the end of the year?

6 **5.** (*a*) A conical stack of hay is 14 ft. in diameter and 18 ft. high at the centre. Allowing 450 cubic feet to the ton, find the value of the stack at $22.50 per ton.

6 (*b*) How many square yards of canvas would be required to cover this stack?

[OVER]

Values.

10 **6.** A grain dealer in Winnipeg ordered his agent at Calgary to buy 12000 bushels of wheat on a commission of 2%. The grain was shipped to Winnipeg and an insurance policy at $1\frac{1}{2}\%$ premium was taken out to cover the cost of the grain during transit and the commission. The premium amounted to $306.00. At what price per bushel was the grain bought?

10 **7.** A person sold $7000 of $5\frac{1}{2}\%$ stock (tax free) at $112\frac{1}{8}$ and invested the proceeds in 6% stock at $119\frac{7}{8}$ (subject to income tax of 25 mills on the dollar). If brokerage on each transaction was $\frac{1}{8}\%$, find the change in the net annual income.

4 **8.** (*a*) Show what is meant by the statement that sterling exchange is at $9\frac{1}{2}\%$.

2 (*b*) What would be the cost here of a draft for £1500 at that rate?

2 (*c*) Find the cost of a draft on Edmonton for $720.50 at $1\frac{1}{4}\%$ premium.

2 (*d*) What is the rate of exchange on Paris when a draft for 7800 francs costs $1500?

10 **9.** The annual premiums charged by an insurance company at certain ages for a $1000 policy are:

Age.....	21	24	27	30	35	40
Premium	$19.50	$20.75	$22.50	$24.25	$27.75	$32.75

Illustrate this graphically, and from the graph determine the *approximate* premiums at ages 25, 33, 37.

10 **10.** Find the difference between the area of the square circumscribed around a circle 30 inches in diameter and the area of the square inscribed in the same circle.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

ALGEBRA.

Time—Three hours.

Values.

7 **1.** Solve $x+y+z=7$

$$x^2+y^2+z^2=21$$

$$yz=8.$$

6 **2.** If the sum of the 4th and 8th terms of an A.P. is 24 and the sum of the 15th and the 19th is 68, find the sum of 20 terms.

6 **3.** What is the common ratio of a geometrical series when the difference between the first and nth terms is equal to the sum of the first $(n\text{-}1)$ terms?

6 **4.** Sum to infinity the series: $2-\sqrt[3]{4}+\sqrt[3]{2}-\ldots\ldots\ldots$

7 **5.** Sum to n terms the series $1^2.2+2^2.3+3^2.4+\ldots$

9 **6.** The weights of two men, A and B, were in the ratio of 12 : 11. One year later they had both gained in weight, the increment being in the ratio of 18 : 1. Their weights were then in the ratio of 29 : 24, and A weighed 174 pounds. Find A's original weight.

8 **7.** If the attendance at church varies directly as the preacher's ability, and inversely as the square root of the length of his sermon; and if 240 and 350 persons attend A's and B's churches when the sermons are 49 and 36 minutes long respectively, compare A's and B's ability.

[OVER]

Values.

6 **8.** Given that $x+y : x-y=a+b : a-b$, and m is the mean proportional between x and y, find the value of x and y.

6 **9.** Solve the equation: $2x^2+6x-17=\sqrt{x(x+3)}-1$.

6 **10.** In how many ways can a party of 10 be seated at a round table so that a certain couple may always be beside each other?

OR

Twenty male and six female candidates apply to a school board who have to fill 10 different positions, 4 of which must be held by men and 3 others by women. In how many different ways may the appointments be made?

7 **11.** Find the greatest term in the expansion of $(1+2x)^{20}$ when $x=\frac{1}{3}$.

7 **12.** Expand $(1-x)^{-3}$ to 6 terms and write the general term of the expansion in its simplest form.

7 **13.** Find the coefficient of the 15th term in the expansion of $\frac{2+x+x^2}{(1-x)^3}$

12 **14.** A father provided in his will that an annuity of $1000 per annum be given to his son for 10 years, to his daughter for the following 20 years and to a benevolent society forever after. What was the cash value of each bequest at the time of the father's death, allowing compound interest at 6% per annum?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

ENGLISH LITERATURE.

Time—Three hours.

MACBETH.

Values.

6 **1.** (*a*) Trace the outward series of events which lead to the downfall of Macbeth.

2 (*b*) What part in his downfall is played by his own sense of guilt?

3 (*c*) What part, if any, by supernatural forces?

6 **2.** The scene in which Lady Macduff and her son appear is usually omitted on the modern stage. Explain the dramatic purpose of the scene, and discuss the question whether the omission of this scene is justified or not.

3. "There's comfort yet; they are assailable;
Then be thou jocund: ere the bat hath flown
His cloister'd flight; ere to black Hecate's summons
The shard-borne beetle with his drowsy hums
Hath rung night's yawning peal, there shall be done
A deed of dreadful note."

2 (*a*) Under what circumstances are the above words spoken?

2 (*b*) What change in fixedness of purpose do you note in the speaker?

3 (*c*) Explain the meaning of the passage beginning—"ere the bat hath flown".

MILTON: MINOR POEMS.

6 **4.** (*a*) Describe the parallel plans of *L'Allegro* and *Il Penseroso*.

3 (*b*) Why are the following passages beautiful?

(1) Two massy keys he bore of metals twain
The golden opes, the iron shuts amain.

Values.

(2) Comes the blind Fury with th' abhorred shears,
And slits the thin-spun life.

(3) While the still Morn went out with sandals gray.

5 **5.** (*a*) I know each lane, and every alley green,
Dingle, or bushy dell, of this wildo-wood,
And every *bosky bourn* from side to side,
My daily walks and ancient neighbourhood;
And if your *stray attendance* be yet lodg'd
Or *shroud* within these limits, I shall know
Ere morrow wake, or the *low-roosted* lark
From her *thatched pallet* rouse.

(1) Explain the situation in which these lines occur.

(2) Explain the meaning of words in italics.

4 (*b*) "But here thy sword can do thee little stead.
Far other arms and other weapons must
Be those that quell the might of hellish charms.
He with his bare wand can unthread thy joints,
And crumble all thy sinews."

Who speaks these words and to whom?

Who is He (l. 4) and what part does he fill in the story? What are the "other weapons" (l. 2) and where are they to be obtained?

SELECTED LYRICS FROM PALGRAVE AND FROM PACE.

6. Shelley: *Ode to the West Wind:*

"If I were a dead leaf thou mightest bear;
If I were a swift cloud to fly with thee;
A wave to pant beneath thy power."

5 (*a*) What series of pictures in the Invocation leads to the ideas contained in the quoted passage? How does the poet apply to himself the emotions raised by these pictures?

4 (*b*) Which of the pictures is used as the underlying figure in the closing section of the poem? Can you suggest a reason why this one rather than one of the others should have been chosen?

6 **7.** What are the most important characteristics which Wordsworth insists upon in *The Happy Warrior?* Quote any lines or phrases which seem to you especially apt in their wording of the ideal which "every man in arms should wish to be."

Values.

10 **8.** "The poet, we imagine, can never have far to seek for a subject: the elements of his art are in him and around him on every hand."

Discuss this statement from the *Essay on Burns* showing fully Carlyle's opinion on this point, and why he thinks that, judged by this opinion, Burns was a genuine poet.

10 **9.** "Nevertheless, we are far from thinking that the problem of Burns's Biography has yet been adequately solved. We do not allude so much to deficiency of facts or documents,—though of these we are still every day receiving some fresh accession,—as to the limited and imperfect application of them to the great end of Biography."

What criticism does Carlyle make of existing Biographies of Burns and what is his view of "the great end of Biography"?

RUSKIN: CROWN OF WILD OLIVE.

10. "The worst of the misunderstandings arising between the two orders (rich and poor) come of the unlucky fact that the wise of one class habitually contemplate the foolish of the other."

5 (*a*) In what connection does Ruskin make this statement? Summarize what he says on this point.

3 (*b*) Comment briefly on Ruskin's discussion, making clear your own opinion in this matter.

7 **11.** "No government is ultimately strong but in proportion to its kindness and justice, and a nation does not strengthen by merely multiplying and diffusing itself."

Summarize the main points of Ruskin's argument from which the above quotation is taken.

8 **12.** (*a*) Quote a passage of at least *eight* lines from Macbeth or Lycidas.

(*b*) Quote a passage of at least *eight* lines from one of the following:

(1) *Alexander's Feast.*

(2) *Nature and the Poet.*

(3) *Memorial Verses 1850.*

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

GEOMETRY.

Time—Three hours.

Values.

7 **1.** Describe an isosceles triangle having each of the angles at the base double of the third angle. (A–14.)

7 **2.** (*a*) If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular to the base and the diameter of the circum-circle. (A–19.)

5 (*b*) A bisector of an angle of a triangle is produced to meet the circumscribed circle. Prove that the rectangle contained by this whole line and the part of it within the triangle is equal to the rectangle contained by the two sides.

7 **3.** (*a*) If three concurrent straight lines be drawn from the angular points of a triangle to meet the opposite sides, then the product of three alternate segments, taken in order, is equal to the product of the other three segments. (A–21.)

2 (*b*) State the converse of (*a*).

8 **4.** (*a*) Find by two methods the area of the triangle contained by the lines $y=3x$, $y=5x$ and $x+2y=77$.

4 (*b*) Find the coordinates of the points of trisection of the straight line joining (1,3) and (6,1).

5 **5.** (*a*) Find the equation of a straight line in terms of its intercepts on the axes.

[OVER]

5 (*b*) P(x',y') is any point and $\frac{x}{a}+\frac{y}{b}=1$ cuts the axes of x and y at A and B respectively. Show that the area of the triangle PAB=

$$\pm\tfrac{1}{2}(bx'+ay'-ab).$$

4 **6.** (*a*) Change the equation of the straight line $x-y+7=0$ to the form $x\ \mathrm{Cos}\propto+y\ \mathrm{Sin}\propto=p$.

5 (*b*) Find the angle between the straight lines $AX+BY+C=0$ and $A'X+B'Y+C'=0$. Deduce the condition of parallelism.

7. Attempt *two* parts only.

5 (*a*) Find the equation of a straight line perpendicular to $AX+BY+C=0$ and at a distance p from the origin.

5 (*b*) Find the equation of the straight line passing through the intersection of $17x-7y=9$ and $3x+19y=34$ and perpendicular to $11x-4y=13$.

5 (*c*) Find the ratio in which the straight line joining $(-5,3)$ and $(6,-1)$ is divided by the line $x-11y+3=0$.

8. Attempt *one* part only.

5 (*a*) Find the coordinates of a point such that the straight line joining it to $(4,-3)$ is bisected at right angles by the line $2x-3y=7$.

5 (*b*) Find the equations of the bisectors of the angles between the straight lines joining $(4,5)$ and $(-5,2)$ respectively to $(3,-7)$.

5 **9.** (*a*) Find the equation of a circle, the centre being on the axis of x and the circumference touching the axis of y.

4 (*b*) Find the equation of a circle having the straight line joining $(7,-5)$ and $(-3,-1)$ as a diameter.

4 **10.** (*a*) Find the length of the chord of the circle $x^2+y^2-6x+14y=42$ cut off by the line $x-y=8$.

4 (*b*) Find the equation of the circle which passes through the origin and cuts off lengths a and b from the axes.

5 **11.** (*a*) Find the equation of the normal to the circle $x^2+y^2=r^2$ at the point (h,k).

4 (*b*) Find the condition that the line $Ax+By+C=0$ may be a tangent to the circle $x^2+y^2=r^2$.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS

SEPTEMBER, 1925.

GRADE XII.

COMPOSITION.

Time—Three hours.

N.B.—Candidates should endeavor to submit papers which are neat in form, free from mechanical errors and carefully expressed. Candidates should spend any extra time in reviewing, revising and rewriting their answers in order to secure these qualities.

Values.

"I can nowise explain what sort of whim, prank, or perversity it was, that, after all these leave-takings, induced me to go to the pigsty, and take leave of the swine! There they lay, buried as deeply among the straw as they could burrow, four huge black grunters, the very symbols of slothful ease and sensual comfort. They were asleep, drawing short and heavy breaths which heaved their big sides up and down. Unclosing their eyes, however, at my approach, they looked dimly forth at the outer world, and simultaneously uttered a gentle grunt; not putting themselves to the trouble of an additional breath for that particular purpose, but grunting with their ordinary inhalation. They were involved, and almost stifled and buried alive, in their own corporeal substance. The very unreadiness and oppression wherewith these greasy citizens gained breath enough to keep their life-machinery in sluggish movement, appeared to make them only the more sensible of the ponderous and fat satisfaction of their existence. Peeping at me, an instant, out of their small, red, hardly perceptible eyes, they dropped asleep again; yet not so far asleep but that their unctuous bliss was still present to them, betwixt dream and reality."

6 **1.** (*a*) Rhodes divides paragraphs into five classes as follows: (1) Isolated, (2) Related, (3) Introductory, (4) Transitional, (5) Summarizing.

Values.

Define these types of paragraphs and state to what type the foregoing paragraph belongs.

2 (*b*) What purpose is served by the first sentence of the paragraph? By the last sentence?

3 (*c*) In developing his paragraph the author has followed the method of giving details or particulars, which reinforce the idea contained in the topic sentence.

Pick out the topic sentence in this paragraph and mention the details or particulars that are added to reinforce the idea contained in it.

3 (*d*) "When describing something seen, or heard, the point of view is the place from which it is seen or heard. It should not be changed unnecessarily and if it is changed then the fact should be mentioned."

What change is there in the point of view in this paragraph?
Was the change necessary? If so, why?
How has it been indicated?

2 (*e*) What do you consider the author's particular purpose in this paragraph?

4 (*f*) Define the three cardinal qualities of style—clearness, force and elegance. Which quality predominates in this paragraph, and why?

3 (*g*) Select two examples of the "right word for clearness"; *two* examples of the "right word for force"; and *two* examples of the "right word for elegance." Explain clearly why you consider each word suited to its particular purpose.

17 **2.** Choose *one* of the following topic sentences and develop it into a well-rounded paragraph in argumentation. You are to make your paragraph about the same length as that quoted in Question 1, developing the proposition logically and ending the paragraph in a manner that will make the whole argument effective.

(*a*) The reading of novels is a waste of time.

(*b*) Public libraries should be kept open on Sundays.

(*c*) Children should be told the truth about Santa Claus.

(*d*) Children under sixteen should be prevented from working in factories.

(*e*) The government should provide for the support of the poor.

(*f*) Preparation for war begets war.

Values.

20 **3.** The following sentences are faulty in that they violate some fundamental principle of rhetoric. Rearrange, condense, or otherwise revise them in order to remove their defects.

(*a*) His mother came of an aristocratic family, and she was strong and energetic in her character, strict and even harsh in her discipline, and firm in her devotion to what she believed to be right.

(*b*) In spite of Dr. Johnson's rude, rough ways, and although he ate like a pig, he had many friends.

(*c*) We were about to leave the swing and Helen caught her foot and over she went; but as the swing was going slowly, she did not hurt herself, but it took some time to brush the dirt from her frock.

(*d*) The very things which I needed for the journey which I was going to make with my friends were not to be procured in the little village which was then my home.

(*e*) He has no ambition, his father was indolent, he let the boy do as he pleased.

(*f*) Two of Mrs. Judson's friends arrived unexpectedly, and I knew she did not have room for all of us, so I made preparations to come home but she would not let me.

(*g*) The vessel made for the shore, and the passengers soon crowded into the boats, and the beach was reached in safety, and the inhabitants of the island received them with the utmost kindness.

(*h*) His estimate, then, is that the industrious and skilled in all trades are better off or in improved circumstances to an extent that should be admitted, as most decided and perceptible, over their condition and circumstances ten years ago.

40 **4.** Write an essay of at least *two* pages on *one* of the following subjects taken from your collateral reading:

(*a*) Prospero's Life on the Island.

(*b*) Caliban.

(*c*) The Character of Prospero.

(*d*) The Norman Schemer.

Values.

(*e*) Harold Takes an Oath over the Bones of the Dead.

(*f*) Hilda, the Prophetess.

(*g*) Stevenson's Night among the Pines.

(*h*) The Green Donkey-driver.

(*i*) Stevenson's Preparations for his Travels.

(*j*) Peter Jenkyns Leaves Home.

(*k*) Miss Matty.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

TRIGONOMETRY.

Time—Three hours.

Values.

4 **1.** (*a*) Define the degree, grade and radian units of measurements of angles.

7 (*b*) In the triangle ABC, x represents the number of degrees in angle A, y the number of grades in angle B and z the number of radians in angle C. If $x:y:z=36:60:1$, find approximately the number of degrees in each angle.

6 **2.** Write down all the other functions of an angle whose Tan is $\sqrt{2}+1$.

4 **3.** (*a*) Show how to find $\text{Cos}\frac{1}{2}\text{A}$ when CosA is known.

6 (*b*) Without using your tables find Cos 112°30′.

8 **4.** (*a*) Derive in terms of the trigonometrical ratios of angle A an expression for each of the following:

(1) Tan 2A. (2) Sin 3A.

5 (*b*) Given $\text{Sin A}=\frac{8}{17}$ and $\text{Sin B}=\frac{5}{13}$, find a numerical value for Tan(A+B).

8 **5.** Prove that the area of any triangle is equal to the product of the lengths of the sides divided by four times the radius of the circumscribing circle.

6. Develop *any two* of the following formulae:

6 (1) $\text{Cos A}+\text{Cos B}=2\text{Cos}\frac{\text{A}+\text{B}}{2}\cdot\text{Cos}\frac{\text{A}-\text{B}}{2}$.

[OVER]

Values.

6 (2) $\dfrac{\text{Tan}\ \frac{A-B}{2}}{\text{Tan}\ \frac{A+B}{2}} = \dfrac{a-b}{a+b}$

6 (3) $\triangle = Rr(\text{Sin}A+\text{Sin}B+\text{Sin}C)$ where R is the radius of the circum-circle of the $\triangle$ ABC and r the radius of the inscribed circle.

4 **7.** Prove $\text{Sin}^{-1}\dfrac{1}{\sqrt{5}} + \text{Cot}^{-1}3 = \dfrac{\pi}{4}$

8 **8.** A tower 145 ft. high stands on an elevation 75 ft. high. At what point in the plane on which the elevation stands must an observation be made in order that the tower and the height of elevation may subtend equal angles?

OR

Two towers whose heights respectively are 180 ft. and 80 ft. stand on a horizontal plane. From the foot of each tower the angle of elevation of the other is taken and one angle is found to be double the other. Find the horizontal distance between the towers.

8 **9.** A balloon rises vertically at a horizontal distance of 3000 yd. from an observer who notes that the angle of elevation is 16° when he first sights the bolloon. When he again measures the angle of elevation he finds it to be 32°. Determine the distance the balloon rose between observations.

10. Attempt *two* parts only.

10 (*a*) C and D are two inaccessible points. A straight line AB in the same plane as CD is measured and found to be 3240 yd. The angle CAB is 98°35′, the angle DAB is 48°25′, the angle DBA is 112°46′ and the angle CBA is 53°26′. Determine the distance between C and D.

10 (*b*) To find the width of a river a line XY, 425 ft. long, is measured on one side, parallel to the bank. On the opposite side of the river a stake Z is set, and the angles ZXY and ZYX are observed and are found to be 48°18′ and 36°24′ respectively. What is the width of the stream?

10 (*c*) The sides of a triangular piece of ground are found to be 5648 ft., 6284 ft. and 4276 ft. respectively. What is the size of the angle contained by the two shorter sides?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

HISTORY OF ENGLISH LITERATURE.

Time—Two and one-half hours.

Values.

3 **1.** (*a*) Name *three* important pieces of Anglo-Saxon poetry, other than Beowulf, and state briefly the nature of each.

5 (*b*) Summarize the story of Beowulf's fight with Grendel's mother in such a way as to convey something of the mood of the poem.

6 **2.** What is the nature of Geoffrey of Monmouth's History? Give its approximate date. Name at least *three* later English writers who have used legendary material first collected by Geoffrey of Monmouth.

10 **3.** For what do we remember the following writers and to what period does each belong: Wiclif, Beda, Langland, Caxton, Wyatt?

12 **4.** (*a*) What is the plan of the Faerie Queene and what is its approximate date?

(*b*) In what form of stanza is the Faerie Queene written? Describe the form and name two poems by other authors written in the same metre.

6 **5.** What is Pepys' Diary? Why is it important? What makes it interesting?

9 **6.** (*a*) Name *three* important writers contemporary with Samuel Johnson and discuss briefly the work of each.

2 (*b*) Why was Johnson the central figure of this period?

[OVER]

Values.

4 (*c*) What important book gives us a picture of the literary group in London at this period?

Discuss any extract from it that you may have read, and point out the qualities that give it value.

4 **7.** (*a*) What was Swift's object in writing (1) *Gulliver's Travels*, (2) *The Battle of the Books?*

3 (*b*) What is the substance of the fable of *The Spider and the Bee?*.

16 **8.** Name the author and give the approximate date of:

(*a*) Robinson Crusoe.

(*b*) Clarissa Harlowe.

(*c*) Tom Jones.

(*d*) Rasselas.

(*e*) Mysteries of Udolpho.

(*f*) Vicar of Wakefield.

(*g*) De Coverley Papers.

(*h*) Humphrey Clinker.

State briefly the importance of (*a*), (*c*), (*f*) and (*h*) in the development of the novel.

9 **9.** The "Dickens gallery" is a phrase often used in referring to the numerous and varied characters in Dickens' novels. Name *six* of the best known portraits in this gallery. Characterize at least *three* of them.

3 **10.** (*a*) What did Arnold believe to be the function of criticism?

3 (*b*) What are some of the characteristics of Arnold's method of criticism?

3 (*c*) What did he understand by Culture?

2 (*d*) In what sense did he use the term "Philistinism"?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

PHYSICAL SCIENCE.

Time—Three hours.

Values.

3 **1.** (*a*) Define a dyne, an erg and a watt as units of measurement.

4 (*b*) A steam engine rated at 120 horse power is belted to a dynamo. If 90 per cent of the engine's power is transformed into electric energy, what is the power of the dynamo in kilowatts?

1 **2.** (*a*) What is meant by (1) velocity (2) acceleration?
4 If the acceleration of a moving body is *a*, determine the relation connecting the velocity, the acceleration and the space traversed in a given time.

4 (*b*) A cyclist, whose weight is 150 pounds, puts all his weight upon one pedal of his bicycle when the crank is horizontal and the bicycle is prevented from moving forward. If the length of the crank is 6 inches and the radius of the chain wheel is 4 inches, what is the tension on the chain?

3 (*c*) Name *three* practical applications of Pascal's principle to secure mechanical advantage.

5 **3.** (*a*) Describe and explain a method of finding the velocity of sound through a brass rod.

3 (*b*) What determines *each* of the *three* features by which musical tones are distinguished?

4 **4.** (*a*) Explain the differences in the qualities of the notes produced by an open and a closed organ pipe of the same pitch.

Values.

7 (*b*) What will be the lengths of the different sections of a string on a sonometer to produce all the notes in an octave of the major diatonic scale, when the string 36 inches in length is tuned to give C=256?

5 **5.** (*a*) Describe an experimental method of demonstrating the Coefficient of Expansion of Gases (Charles' Law).

6 (*b*) Explain the *three* methods by which heat may be transferred from one body to another and give a practical use made of each method.

4 **6.** (*a*) What is meant by the relative humidity of the air? How is it determined?

5 (*b*) Copper rivets weighing 24 grams at 99°C are poured into a copper calorimeter (weight 20 grams) containing 39.5 grams of water at 4°C. If the temperature of the mixture is 9°C what is the specific heat of copper?

4 **7.** (*a*) Describe a method of finding the illuminating power of a source of light and indicate clearly how the calculations should be made.

Either

4 (*b*) Draw a diagram to show the nature and location of an image of an object produced by light passing through a double concave lens.

Or

4 (*c*) Draw a diagram to illustrate the paths of three rays of light coming up through a thick piece of glass, the first ray striking the top face of the glass at an angle greater than the critical angle, the second ray striking the top surface at an angle equal to the critical angle, and the third ray striking the top surface at an angle less than the critical angle, the critical angle of the glass being $40\frac{1}{2}°$.

4 **8.** (*a*) Explain the formation of the rainbow.

5 (*b*) Describe the mechanism of a spectroscope and explain the use made of this instrument.

4 **9.** (*a*) Explain the efficiency of lightning rods as a protection against atmospheric electricity.

4 (*b*) What are the underlying principles in the electro-plating of a silver spoon? Explain by referring to the law of electrolytic dissociation.

Values.

8 **10.** Describe the construction and explain the action of *one* of the following:

(1) Direct current dynamo.

(2) Alternating current dynamo.

4 **11.** (*a*) If six cells, each with $\frac{1}{2}$ ohm internal resistance, and 1.1 volts E.M.F. are connected (1) all in series (2) in two parallel sets of three cells each, calculate the current sent in each case through a wire of resistance .8 ohm.

5 (*b*) How are Rontgen rays produced and what are *three* uses to which they are put?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

HISTORY.

Time—Two and one-half hours.

NOTE TO CANDIDATES: Candidates will answer three questions from Section A and three from Section B, one of which *must* be Question 5.

SECTION A.

Values.

1. "It is not strange, then, that in western Europe serfdom continued through many centuries, and that its end finally came through circumstances over which the villagers had no control."—Botsford.

8 (*a*) Describe the position of the serf on the mediaeval manor.

9 (*b*) Trace the processes by which he eventually obtained emancipation from serfdom.

2. "Aroused by the ever increasing power of the Protestants, the Catholic Church summoned its forces to regain the ground which it had lost."—Botsford.

Outline this great struggle under the headings:

4 (*a*) The Council of Trent.

3 (*b*) The Society of Jesus.

5 (*c*) Philip II's championship of Catholicism.

5 (*d*) The Religious Wars in France and Germany.

3. Discuss the following features of seventeenth century England:

5 (*a*) The revolution in agriculture.

6 (*b*) Social life and customs.

6 (*c*) Literary and scientific progress.

[OVER]

Values.

9 **4.** (*a*) Analyze carefully the causes of the French Revolution.

8 (*b*) What of permanent value did the Revolution bequeath to France and to the world at large?

SECTION B.

5. Compare Latin America and English-speaking America with respect to:

5 (*a*) Their populations.

6 (*b*) Their political development.

6 (*c*) Their economic development.

OR

Make clear in some detail, and where possible by contrasts with foreign countries, the following characteristics of the English constitution:

5 (*a*) Its flexibility.

9 (*b*) Its legality and impartiality.

3 (*c*) Its unreality.

16 **6.** State the essential principles on which Cabinet government operates, in each case making as clear as possible how and when the principle came to be established.

16 **7.** Describe the origins of the House of Commons and the growth of its powers to the end of the reign of Edward III.

8. "Thus the Judiciary in England was rendered entirely independent of the Executive. It is also entirely distinct from the Legislature."—Marriott.

5 (*a*) Trace the struggle to free the Judiciary from Executive control.

5 (*b*) Describe the relation of the Judiciary to the Legislature in Britain.

6 (*c*) Make clear the difference between the position of the Judiciary in Britain and that which it occupies in the United States.

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

CHEMISTRY.

Time—Three hours.

Values.

4 **1.** Find the molecular weight and formula of a gas, if one litre of it weighs 1.16 g. and its percentage composition is, carbon 92.31% and hydrogen 7.69%. (C=12, H=1.)

5 **2.** (*a*) Describe, using a diagram, a method for the preparation of sodium in commercial quantities.

1 (*b*) Write the equation expressing the reaction involved in (*a*).

1 **3.** (*a*) State the effect produced on the freezing point of water when a gram molecular weight of alcohol is dissolved in one litre of it.

1 What difference would there be on the freezing point if a gram molecular weight of copper sulphate were dissolved in the same quantity of water?

3 Explain.

6 (*b*) Write ionization equations to show what takes place when each of the following dissolves in water:

(1) Nitric acid.

(2) Acetic acid.

(3) Caustic soda.

(4) Calcium hydroxide.

(5) Sodium chloride.

(6) Magnesium sulphate.

Values.

4. Write equations to express the chemical changes which take place in the following:

1 1 2 (*a*) Air is blown rapidly through a powerful electric arc; the resulting substances are allowed to cool a little and are then passed into water.

1 1 1 4 (*b*) Coal is burned in an ordinary coal stove for heating purposes.

(*c*) Ferrous sulphide is acted on by hydrochloric acid and the gas formed passed into a solution of lead nitrate.

5. Write an account of calcium carbonate under the following heads:

2 (*a*) The forms in which it occurs as a mineral.

2 (*b*) The part it plays in the structure of animals.

2 (*c*) *Four* important commercial uses.

3 (*d*) Its solubility in water, accounting for the deposit in vessels in which river water is boiled.

6. Write equations expressing the chemical changes which take place in the following processes:

1 (*a*) Quicklime is exposed to the atmosphere.

2 (*b*) Chlorine is passed through slaked lime.

2 (*c*) Sulphuric acid is added to bleaching powder.

2 (*d*) A mixture of quicklime and coke is heated to about 1600°C by a powerful alternating current.

2 (*e*) Cyanimide is heated under pressure with steam.

1 **7.** (*a*) Write the name and chemical formula of the chief ore of mercury.

4 (*b*) Describe the method of obtaining mercury from its ore.

(*c*) Give an account of the chlorides of mercury under the following headings:

3 (1) Formulae, common names, valency of the metal in each.

4 (2) Method of preparing each.

2 (3) One important use of each.

11 **8.** What is the Periodic Law? Illustrate by referring to the Nitrogen Family *or* the Sodium Family *or* the Halogens, making special reference to atomic weights, valencies, physical and chemical properties and characteristic chemical compounds with hydrogen and oxygen.

Values.

4 **9.** (*a*) State *four* commercial uses of tungsten.

2 (*b*) What properties of tungsten make it a suitable substance for each of the uses mentioned in (*a*)?

3 (*c*) Describe a method for making potassium permanganate.

3 (*d*) Illustrate an important chemical property of potassium permanganate by describing the change which takes place when it is added slowly to a strong solution of sulphur dioxide in water. What conclusion would you draw from the result obtained after adding a few drops of barium chloride solution to the mixture?

3 **10.** (*a*) Name and give formulae of *three* important ores of iron.

5 (*b*) Describe the open hearth process for the making of steel.

1 (*c*) Write formulae for the two chlorides of iron.

2 (*d*) Show how to convert ferrous into ferric chloride.

2 (*e*) How can ferric salts be distinguished from ferrous salts?

100

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

LATIN.

Time—Three hours.

Values.

8 **1.** Translate into English:

Mirificae rei non interfuisti; ne ego quidem, sed me recens fabula excepit. Passennus Paullus, splendidus eques Romanus et in primis eruditus, scribit elegos. Gentilicium hoc illi; est enim municeps Properti, atque etiam inter maiores suos Propertium numerat. Is cum recitaret, ita coepit dicere, "Prisce, iubes." Ad hoc Iavolenus Priscus (aderat enim, ut Paullo amicissimus), "Ego vero non iubeo." Cogita qui risus hominum, qui ioci. Est omnino Priscus dubiae sanitatis. Interest tamen officiis, adhibetur consiliis, atque etiam ius civile publice respondet; quo magis quod tunc fecit, et ridiculum et notabile fuit.

1 (*a*) *Recitaret.* Write a brief note on the practice.

1 (*b*) *Ius civile publice respondet.* Explain.

8 **2.** Translate into English:

Longum est altius repetere quemadmodum acciderit ut cenarem apud quendam, ut sibi videbatur, lautum et diligentem, ut mihi, sordidum simul et sumptuosum. Nam sibi et paucis opima quaedam, ceteris vilia et minuta ponebat. Vinum etiam in tria genera descripserat, aliud sibi et nobis, aliud suis nostrisque libertis. Animadvertit qui mihi proximus recumbebat et an probarem interrogavit. Negavi. Tu ergo, inquit, quam consuetudinem sequeris? Eadem omnibus pono. Etiamne libertis? Etiam; convictores enim tunc, non libertos puto.

1 (*a*) Explain briefly the Roman manner of dining.

1 (*b*) *Libertus.* Explain his status in Roman society.

Values.

8 **3.** Translate into English:

PA. Suadere noli. DA. Ex ea re quid fiat, vide.
PA. Ut ab illa excludar, huc concludar. DA. Non itast.
nempe hoc sic esse opinor: dicturum patrem
"ducas volo hodie uxorem"; tu "ducam" inquies.
cedo, quid iurgabit tecum? hic reddes omnia
quae nunc sunt certa ei consilia incerta ut sient,
sine omni periclo; nam hoc haud dubiumst quin Chremes
tibi non det gnatam. nec tu ea causa minueris
haec quae facis, ne is mutet suam sententiam.
patri dic velle; ut, quum velit, tibi iure irasci non queat.
nam si te aequo animo ferre accipiet, neglegentem feceris.
aliam otiosus quaeret; interea aliquid acciderit boni.

2 (*a*) Write a note on the slave in comedy as exemplified by Davus in this play.

8 **4.** Translate into English:

CH. At mi unus scrupulus etiam restat qui me male habet. PA. dignus es
cum tua religione, odium! Nodum in scirpo quaeris. CR. Quid istuc est?
CH. Nomen non convenit. CR. Fuit hercle huic aliud parvae. CH. Quod, Crito?
numquid meministi? CR. Id quaero. PA. (Aside). Egone huius memoriam patiar meae
voluptati obstare, quum egomet possim in hac re medicari mihi?
Non patiar. (Aloud). Heus, Chreme, quod quaeris, Pasibulast. CH. Ipsast. Cr. East.

1 (*a*) *Nodum in scirpo quaeris.* Explain the proverb.

1 (*b*) What important fact, from the standpoint of the legal wedding of Pamphilus and Glycerium, is established by this recognition scene?

10 **5.** Translate into English at sight:

Post solem plerumque aqua frigida lavabatur, deinde dormiebat minimum; mox, quasi alio die, studebat in cenae tempus. Super hanc liber legebatur, adnotabatur et quidem cursim. Memini quendam ex amicis eius, cum lector quaedam perperam pronuntiasset, revocasse eum et repetere coegisse. Huic amico avunculus meus "Intellexisti nempe?" Cum ille adnuisset, avunculus meus iterum "Cur ergo revocabas?" inquit,

Values.

"amplius decem versus hac tua interpellatione perdidimus!" Tanta erat ei parsimonia temporis.

Sol—the sun-bath.
Et quidem cursim—and that too very rapidly.
Perperam—amiss.
Adnuo—to nod assent.
Interpellatio—interruption.
Parsimonia—economy.

50

SECTION B (GRAMMAR AND COMPOSITION)

1. Decline together throughout the singular—

3 *hic solus dies*

and throughout the plural—

2 *levia pavimenta.*

5 **2.** Give the principal parts of the verbs from which are derived the following forms:

excessit, cecidit, deflectemus, gaudet, differre.

4 **3.** (*a*) Give the other degrees of comparison for the following: *laudabilis, parum, male, magis.*

4 (*b*) *Mihi . . . nobis.* Fill in the other cases for each of these two words.

4 **4.** Explain the following forms from the Andria of Terence: *itan, sies, claudier, eccum.*

5. Explain briefly the syntax of the italicized words and phrases in the following:

2 (*a*) Longum *est* altius repetere quemadmodum *acciderit* ut cenarem apud quendam.

1 (*b*) Si quem interroges "Hodie quid egisti?" *respondeat* ita.

1 (*c*) Simul quae legentem *fefellissent*, transferentem fugere non possunt.

6. Translate into Latin:

6 (*a*) What these conspirators in the city will attempt, they do not know, but they fear that they are planning (*molior*, 4) the destruction of the whole Roman power.

Values.

6 (*b*) Remember, fellow-citizens, that the greatest conspiracy within the memory of man has been suppressed while you did not even know that a conspiracy had been formed.

6 (*c*) I do not see how it can be doubted that it was to the interest of the state to employ severity against men of such a sort.

6 (*d*) You must therefore see to it that a general is sent to Asia who can protect your allies, and if you want to please those allies, Pompey is the man to be chosen.

50

HIGH SCHOOL AND UNIVERSITY
MATRICULATION EXAMINATIONS BOARD.

DEPARTMENTAL EXAMINATIONS.

SEPTEMBER, 1925.

GRADE XII.

FRENCH.

Time—Three hours.

PART I (GRAMMAR AND COMPOSITION)

Values.

1. Translate into French:

2 (*a*) I am wondering if that pen is yours or your brother's; how much did it cost?

2 (*b*) The lady has been mistaken in that affair, and we have been deceived also.

2 (*c*) It was very slippery this morning, and my mother, going down the street, fell and broke her arm.

2 (*d*) Are you not a pretty good judge of pictures? Oh, I suppose I am a fairly good judge of them.

2 (*e*) Would you prefer that I should go to church or stay at home and work this morning?

2 (*f*) He was not afraid it would rain, but he was afraid that a certain person would be there whom he did not want to see.

2 (*g*) Whoever you are, you will have to obey the law so long as you are in this country.

2 (*h*) I saw the children coming when I was on the hill at a quarter past nine this morning.

2 (*i*) I have tooth-ache and ear-ache, so I cannot go out.

2 (*j*) Louis the Fourteenth, in his time called the Great, ruled over France for more than seventy-five years.

Values.

15 **2.** Translate into French:

One day Louis XII having heard that a great lord had beaten a farmer, sent for the former and kept him for dinner. A splendid meal was served to the lord, everything you could think of, except bread, which the King had ordered was not to be given to him. The lord wondered why this was. The King passed by and, addressing his guest, observed: "Well, have you been well treated?" "Sire, I have had a wonderful meal, but I have not dined: to live, one must have bread." "Come now," replied the King, looking at the lord severely, "try to understand the lesson I have just given you, and since you must have bread, try, sir, to treat well those who produce it."

15 **3.** Write a composition in French, of not less than one hundred words, describing a fire, touching on such points as: whose house it was; what time it was; how many people were in it; how the fire arose; how the fire was put out; what damage was done; etc.

PART II

(*AUTHORS AND SIGHT TRANSLATION.*)

10 **1.** Translate into English:

Je ne savais que penser de tout cela, lorsque, se redressant, il me dit:

"Dans ce moment, Joseph, il y a quatre cent mille familles qui pleurent en France: notre Grande-Armée a péri dans les glaces de Russie; tous ces hommes, jeunes et vigoureux, que nous avons vus passer durant deux mois, sont enterrés dans la neige. La nouvelle est arrivée cette après-midi. Quand on pense à cela, c'est épouvantable!"

Moi, je me taisais; ce que je voyais de plus clair, c'est que nous allions bientôt avoir une nouvelle conscription, comme après toutes les campagnes, et que cette fois les boîteux pourraient bien en être. Cela me rendait tout pâle, et la prédiction de Pinacle me faisait dresser les cheveux sur la tête.

J'entrai dans ma chambre et je me couchai. Longtemps je ne pus fermer l'oeil, rêvant à la conscription, à Catherine, à tous ces milliers d'hommes enterrés dans la neige, et me disant que je ferais bien de me sauver en Suisse. Vers trois heures, j'entendis M. Goulden se coucher à son tour.

5 (*a*) Write out in full the past definite of the following verbs found in this extract:

vus; me taisais; allions; faisait; disant.

Values.

(*b*) Translate into French:

1 1. She has become silent.

1 2. I shall see thousands going by.

1 3. He will not know what to do.

2 (*c*) "La prédiction de Pinacle"—Explain the allusion.

10 **2.** Translate into English:

C'était vrai, le temps était très beau; mais, en arrivant à la caserne de Rosenthâl, nous aperçûmes nos officiers sous la grande porte, causant entre eux avec vivacité. Les hommes de garde écoutaient, et les passants s'approchaient pour entendre:—On nous dit que les conférences de Prague était rompues, et que les Autrichiens venaient aussi de nous déclarer la guerre, ce qui nous mettait deux cent mille hommes de plus sur les bras.

J'ai su depuis que nous étions alors trois cent mille hommes contre cinq cent vingt mille, et que parmi nos ennemis se trouvaient deux anciens généraux français, Moreau et Bernadotte. Chacun a pu lire cela dans les livres; mais nous l'ignorions encore, et nous étions sûrs de remporter la victoire, puisque nous n'avions jamais perdu de bataille. Du reste, la mauvaise mine qu'on nous faisait ne nous inquiétait pas: en temps de guerre, les paysans et les bourgeois sont en quelque sorte comptés pour rien; on ne leur demande que de l'argent et des vivres, qu'ils donnent toujours, parce qu'ils savent qu'à la moindre résistance on leur prendrait jusqu'au dernier sou.

5 (*a*) Write out the principal parts of the following verbs occurring in the passage:
venaient; mettait; su; pu; lire.

(*b*) Répondez brièvement en français:

1 1. Les conférences de Prague—Expliquez.

1 2. Bernadotte—Ecrivez une note sur ce personnage.

3 (*c*) What would you judge to be the attitude of the authors towards war? Support your answer by reference to the text.

10 **3.** Translate at sight into English:

Jeanne D'Arc sut ainsi ce que c'est que la guerre. Elle comprit cet état antichrétien, elle eut horreur de ce règne du diable, où tout homme mourait en péché mortel. Elle se demanda si Dieu permettrait cela toujours, s'il ne mettrait pas un terme à ces misères, s'il n'enverrait pas un libérateur, comme il l'avait fait

souvent pour Israël, un Gédéon, une Judith..... Elle savait que plus d'une femme avait sauvé le peuple de Dieu, que dès le commencement il avait été dit que la femme écraserait le serpent. Elle avait pu voir au portail des églises sainte Marguerite, avec saint Michel, foulant aux pieds le dragon.....Si, comme tout le monde disait, la perte du royaume était l'oeuvre d'une femme, d'une mère dénaturée, le salut pouvait bien venir d'une fille.' C'est justement ce qu'annonçait une prophétie de Merlin; cette prophétie, enrichie, modifiée selon les provinces, était devenue toute Lorraine dans le pays de Jeanne D'Arc.

PROMOTION TESTS, 1925.

GRADE V.

LITERATURE.

N.B.—Teachers will explain to candidates the meaning of the options in each question: only one part to be attempted.

1. *Copperfield and the Waiter.*

(*a*) How did David feel when he was brought into the dining-room of the inn?
(*b*) What did the waiter mean when he said, "Now, six-foot, come on"?
(*c*) Tell how the waiter helped David to eat his dinner.
(*d*) Who wrote this story? Name *two* other stories he wrote.

OR

Charge of the Light Brigade.

(*a*) Against whom were the British fighting, and where?
(*b*) What were the soldiers ordered to do?
(*c*) Knowing that a mistake had been made, what did they do?
(*d*) Why was the place called the "Valley of Death"?

2. *The Beginning of Rome.*

Tell about the Beginning of Rome by writing a short paragraph about *each* of the following:
(*a*) What the wicked uncle did to the true king's sons.
(*b*) How the boys came to be saved and fed.
(*c*) How they punished the wicked king.
(*d*) How they started the new city.
(*e*) How it got its name.

OR

The Miraculous Pitcher.

(*a*) What was the cause of the noise Philemon and Baucis heard?

(*b*) Describe the younger stranger.

(*c*) How did the strangers reward Philemon and Baucis?

(*d*) They were asked to make a wish. What was it? How was it granted?

3. *The Song my Paddle Sings.*

(*a*) In what direction does the canoeist wish to sail? How do you know this?

(*b*) What parts of Canada are referred to in the quotation?

"Sleep, sleep!
By your mountains steep,
Or down where your prairie grasses sweep."

(*c*) What is meant by, "Now fold in slumber your laggard wings"?

(*d*) Tell about the most exciting part of the poem.

(*e*) Explain, "A fir-tree rocking its lullaby
Swings, swings
Its emerald wings."

OR

The Laws of the Land.

(*a*) Tell what would likely happen if the teacher were to allow pupils to do exactly as they pleased.

(*b*) After a day or two, what would the best pupils likely suggest?

(*c*) Where do our laws come from?

(*d*) Prove that although we must obey our laws they really give us freedom and liberty.

4. *An Adventure with a Whale.*

Tell the story by writing a short paragraph about each of the following:

(*a*) How the boat came up to the whale.

(*b*) What happened to the boat.

(*c*) How the boy got on the whale.

(*d*) What happened to him there.

(*e*) How he was saved.

OR

The Heart of Bruce.

(*a*) What had Bruce made Douglas promise? Why?

(*b*) Tell about the dream Douglas had.

(*c*) Who were fighting in Spain when Douglas arrived there? Whom did he help? and why?

(*d*) Tell how Douglas died.
(*e*) What did they do with his body and "The Heart"?

5. Write eight lines from each of two selections you have memorized during the year.

GRADE VI.

LITERATURE.

N.B.—Teachers will explain to candidates the meaning of the options in each question; only one part to be attempted.

1. *Mr. Winkle on Skates.*

(*a*) Explain why, when the skates were found, "Mr. Winkle expressed exquisite delight and looked exquisitely uncomfortable."
(*b*) Describe his efforts to put on the skates.
(*c*) Why did he tell Sam that he could have the spare coats and the five shillings?
(*d*) Describe Mr. Winkle's downfall. How did Mr. Pickwick deal with him?

OR

The Rescue.

Give an account of the rescue of the sheep by writing a paragraph about each of the following:
(*a*) The snow-storm. (*b*) The tramp through the snow. (*c*) The digging. (*d*) What they found. (*e*) The action of the dog. (*f*) How the sheep were brought home.

2. *The Red Thread of Honor.*

(*a*) Where is the scene of the story?
(*b*) What gallant deed had the eleven soldiers done?
(*c*) What was the custom of the natives with regard to their own dead heroes?
(*d*) What special honor did they bestow upon the dead British soldiers?

OR

The Wrestling Match.

(*a*) Who was the challenger? Who accepted the challenge?
(*b*) What did Rosalind and Celia try to do before the match?
(*c*) What did the Duke say to the winner when he heard who he was?

(*d*) What does Rosalind mean when she says,
"My father loved Sir Rowland as his soul"?

(*e*) Where was her father?

(*f*) What does she mean by—
"Sir, you have wrestled well and overthrown
More than your enemies"?

3. *The Burial of Moses.*

(*a*) Where and by whom was Moses buried?

(*b*) With what noiseless and wonderful things does the poet compare his funeral?

(*c*) Explain, "Perchance the lion stalking
Still shuns that hallowed spot."

(*d*) How does the poet describe the funeral of a brave warrior?

(*e*) To what do these words refer:
"Truths half so sage
As he wrote down for men"?

OR

Horatius.

(*a*) Describe the fight at the end of the bridge.

(*b*) Meanwhile, what was going on?

(*c*) Explain, "The she-wolf's litter stand savagely at bay."

(*d*) What part did Sextus take in the fight?

(*e*) How did the wishes of Lars Porsena and Sextus differ as Horatius was swimming?

(*f*) How was Horatius rewarded?

4. *Drake's Drum.*

(*a*) Tell what you know about Sir Francis Drake.

(*b*) What is meant by—
"Drake he's in his hammock an' a thousand miles away,
Slung atween the round shot in Nombre Dios Bay"?

(*c*) What was his last order?

(*d*) Explain the reference—
"An' drum them up the Channel as we drummed them long ago."

OR

From Canada by Land.

Tell the story of Mackenzie's discovery of the Pacific by writing a paragraph about each of the following:

(*a*) The start overland for the Pacific. (*b*) The rapids on the Peace River. (*c*) The divide. (*d*) The Indians' information. (*e*) The Fraser River. (*f*) The last divide. (*g*) The Pacific.

5. *Recessional.*

(*a*) Who is the author? Name *three* other stories or poems that he wrote.

(*b*) What was happening in England when this poem was written?

(*c*) What was the poet's purpose in writing this poem?

(*d*) Explain:

(1) Far-flung battle-line.

(2) We hold.
Dominion over palm and pine.

(3) Far-called our navies melt away.

(4) Heathen heart that puts its trust
In reeking tube and iron chard.

OR

Henry Hudson.

(*a*) Name the two trading companies that were formed in Queen Elizabeth's time and tell why they were formed.

(*b*) Tell how Hudson discovered the river that bears his name.

(*c*) Describe Hudson's last voyage by writing a paragraph about each of the following: (1) The discovery of Hudson's Bay. (2) How the crew spent the winter. (3) The mutineers. (4) The fate of Hudson. (5) How the news reached England.

6. (*a*) Write from memory *two* stanzas from *one* of the following:

Ye Mariners of England, Creation, The Song my Paddle Sings, The Spires of Oxford.

OR

Write from memory *three* stanzas from *one* of the following:

Dickens in Camp, Kitchener of Khartoum.

(*b*) Write from memory one of the following selections: Love of Country, In Flanders Fields, 'Tis the Last Rose of Summer.

GRADE VII.

LITERATURE.

N.B.—The teacher will explain the option in each question to the candidates: only one part to be answered.

Each of the first five questions is in two parts, one from Grade VII work, one from Grade VIII. Teachers should use only the question pertaining to the work studied. In the last question the first eight parts are on Grade VII work, the second eight on Grade VIII work.

1. *Belshazzar's Feast.*

Tell the story of Belshazzar's Feast under these headings: (1) The feast, (2) The writing on the wall, (3) No one can explain it, (4) The queen's suggestion, (5) The explanation, (6) What happened to Belshazzar.

OR

The Father of the Forest.

Explain the following references:

(*a*) "Round her rough coasts the thundering main,
Strewn with the ruined dream of Spain."

(*b*) "The róystering prince, that afterward
Belied his madcap youth and proved
A greatly simple warrior lord."

(*c*) "The sweet queen of a tragic hour,
Crowned with her snow-white memory
The crimson legend of the tower."

(*d*) "Or him, the footprints of whose power
Made mightier whom he overthrew."

2. *The Pipes at Lucknow.*

(*a*) What war does the story tell about?

(*b*) Tell about the condition of the British people in Lucknow.

(*c*) What part did Jessie Brown play in the story?

(*d*) Explain the following references:

(1) "Day by day the Indian tiger
Louder yelled and nearer crept."

(2) "But to sounds of home and childhood
The Highland ear was true."

(3) "And the tartan clove the turban,
As the Goomtee cleaves the plain."

OR

A Day with Sir Roger.

(*a*) Write a brief sketch of the yeoman *or* Tom Touchy.

(*b*) What took place in the court room?

(*c*) Relate what happened at the inn.

(*d*) Explain the humour in the Spectator's saying, "that much might be said on both sides."

3. *Columbus Discovers Land.*

Write a paragraph about each of the following:

(1) The beginning of the voyage. (2) The conduct of the crew and how he dealt with them. (3) Evidences of land. (4) The scene on shore.

OR

Brutus and Antony.

(*a*) What had happened in Rome before this scene begins?
(*b*) State Brutus' reasons for his action.
(*c*) How did Antony prove that Caesar was not ambitious?
(*d*) Explain the following references:
(1) "Mark how the blood of Caesar followed it,
As rushing out of doors to be resolved
If Brutus so unkindly knocked or no."
(2) "Have patience, gentle friends, I must not read it;
It is not meet that you should know how Caesar loved you."

4. *Alexander Selkirk and The Solitude of Alexander Selkirk.*

(*a*) Why did he land on the island?
(*b*) Tell how he overcame his loneliness.
(*c*) What lesson do we learn from the tale?
(*d*) Explain the following references:
(1) "O Solitude! where are thy charms
That sages have seen in thy face?"
(2) "They are so unacquainted with man,
Their tameness is shocking to me."

OR

Ivanhoe and Isaac of York.

(*a*) Write a note on how the Jews were treated in England at the time of the story.
(*b*) Relate the conversation between the Palmer and the Jew before they parted.
(*c*) Write a brief sketch of the life of Sir Walter Scott.

5. *King Arthur and his Knights.*

(*a*) Tell how Arthur became king.
(*b*) Sketch the character of Sir Galahad.
(*c*) Tell how the "Round Table" order was formed.
(*d*) Give an account of Arthur's parting with the sword, Excalibur.

OR

King Robert of Sicily.

(*a*) What happened in the church at vespers and after?
(*b*) Who took the king's place and how did he treat King Robert?
(*c*) What happened during the visit to Rome?
(*d*) What is the lesson taught by the story?

6. Quote *eight* consecutive lines from each of *two* selections you have memorized during the year.

7. Name the selections from which any *five* of the following are taken and explain the connection of each with the rest of the story:

(1) "You leave your umbrella at home, and sally forth with your sprinkling pot, and ten to one you get drowned."

(2) "Now, MUSH!"

(3) "But—absent years from one another—
Great was the longing that I had
To see my mother."

(4) "Gold such as thine ne'er drew the Spanish prow
Through the primeval hush of Indian seas."

(5) "This day is called the feast of Crispian:
He, that outlives this day, and comes safe home
Will stand a tip-toe when this day is named."

(6) "And soon, too soon, the wintry hour
Of man's maturer age
Will shake the soul with sorrow's power
And stormy passion's rage."

(7) "But, i'faith she had been wiser than me,
For she took a bottle to church."

(8) "It's coming yet, for a' that
That man to man the world o'er
Shall brothers be for a' that."

---

(9) "Spoke more low,
But cheerily still; and said, 'I pray thee then,
Write me as one that loves his fellow men.' "

(10) "And so they sweep the solitudes, free men of all the earth;
And so they sentinel the woods, the wilds that know their worth."

(11) "For Brutus is an honourable man,
So are they all, all honourable men."

(12) "I am that man upon whose head
They fix the price, because I hate
The Austrians over us."

(13) "I was not ever thus nor prayed that Thou
Shouldst lead me on."

(14) "He has put down the mighty from their seat,
And has exalted them of low degree."

(15) "The rogue had once the impudence to go to law with the widow."

(16) "Here and here did England help me;
How can I help England?—Say."

GRADE V.

COMPOSITION.

1. A Shetland Pony
A Little Child in Mischief
Sunday School
An Apple Tree.

(*a*) Choose *one* of these for your topic. Write down in a list the first *ten things* that come into your mind about it.

(*b*) Make a second list by choosing and writing down the best idea you have for the subject of a paragraph. Choose and write down after the first the five ideas that would best go with it to make a paragraph. You need not write the paragraph.

2. (*a*) Write these sentences, putting the right word in the blank spaces.

The boys.....going to the creek.
Father.....home yesterday.
We.....at school yesterday.
Tom.....a tiger at the circus.
Don't do that, Fanny, it.....polite.

(*b*) Tell, in a sentence, what *each* of these words means:

Bonfire	Envelope	Mars
Scorch	Plumbing.	

3. (*a*) Write an interesting sentence using *each* of these groups of words:

a long cry	tall pine trees
the silver moon	a column of smoke
a blue-eyed child.	

(*b*) Write sentences using correctly the abbreviations for the following words:

Mister	Doctor	Professor
Mistress	Reverend.	

4. In these sentences draw *one* line under the subject or naming part, and *two* lines under the Predicate or telling parts:

Mary had a little lamb.
The baby slept soundly.
At night Jack milks the cow.
Along came a spider.
Do you skate?
I play tennis.
The grey pony belongs to me.
Call Mary.
In the nest lay three blue eggs.
Tom's little brother broke his arm.

5. Write a paragraph of four or five sentences upon *any one* of the following topics. Remember to make each sentence about the topic.

Robin Hood	Making a swing
Making Butter	Writing a letter
A Dutch Boy	Black Beauty
"Jo" (in Little Women)	A Pirate Ship
Our Baby.	

GRADE VI.

COMPOSITION.

1. Mistress Linton was a very busy woman. She had four maids to help her, besides Rose Mary, but there was a great deal to do. They could not buy things four hundred years ago as we do now. They had to make everything they needed. Bread, butter, cheese, cloth, yarn, dresses, caps, baskets, brooms, sheets, blankets; everything had to be made by the family. The women milked the cows, took care of the milk, made the butter and cheese. They did all the cooking; and it was much harder work to cook in those days when they had only fire-places, than it is now to cook upon good stoves with handy ovens. The women made the clothes for the family also. This was a great deal of work, for they did not buy the cloth, but made it.

(*a*) Read this paragraph carefully and with your pen draw a line through each of the sentences or parts of sentences which do *not* tell about:

"What Women did 400 Years Ago."

(*b*) Write the remaining sentences in a paragraph upon the above topic, arranging them in the best order you can.

2. (*a*) Write the word which means more than one for:

tree, ox, baby, potato, man.

(*b*) Write the word which means female for:

father, prince, cock, he-goat, gentleman.

(*c*) Write five words each with a different prefix.

(*d*) Show, in good sentence form, that you understand the meaning and use of the following words:

substitute, agriculture, deposit, temperature, obedience.

3. (*a*) Use correctly in sentences:

good, can, may, lay, learn, well, guess, don't.

(*b*) Write interesting sentences, using each of the following:

golden eyes	insolent
benumb	absurd
aeroplane	a floating spar
splutter	juggler.

4. Write a letter to the Massey-Harris Company, Toronto, Ont. Tell them:

(1) That the plow you ordered has not arrived to date.

(2) That you cancel the order, as it is now too late to use the plow.

5. For *each* of the following parts, write *two* sentences—

(*a*) That have adjectives in them.

(*b*) That have pronouns in them.

(*c*) That show that past time is meant.

(*d*) That have phrases in them.

(*e*) That have clauses in them.

6. Write a paragraph of five or six sentences on *any one* of the following topics:

An angel	Robinson Crusoe
A garden	Sir Walter Raleigh
A meadow-lark	Uncle Tom (in Uncle Tom's Cabin)
Something that once happened to you.	On our Farm.

GRADE VII.

COMPOSITION.

1. (*a*) Choose as your subject any game that children play. Make a list of the essential points that must be told in evplaining how to play it. Be careful to arrange your points in the right order.

(*b*) Write a paragraph explaining how to play the game.

2. (*a*) Give the meaning of each of the following words:

Mellow, shrewd, avarice, treasury, exhale.

(*b*) Give the meaning of each of the following prefixes or suffixes. Give two examples of the use of each:

Mis, with, un, craft, kin.

(*c*) Write interesting sentences using suitable describing words with each of the following:

Wind, orator, trumpets, Stevenson (R. L.), a brook.

3. (*a*) Write a short letter to a friend apologizing for having lost a book you had borrowed.

(*b*) Write a letter to the Canadian Dairy Company, Edmonton, asking if visitors are allowed to inspect their plant.

4. (*a*) Re-write the following sentences filling the blanks with the proper words.

Do not haggle.....the price.

I.....call early to-morrow.

Step.....the room.
Do it.....I do.
There.....four yesterday.
He will not tamper.....the lock.
I.....make cake.
I.....do it in spite of you.
She is anxious.....her son.
He.....done it.

(*b*) Change the words in the following sentences so as to improve the sound:

He wore a blue, long cloak.
She saw the house across the fields with the tower.
Five men stood by the roadside with picks.
Down the road, clip! clop! came a horse.
I had the best time that I ever had.
Sunday morning was a fine and sunny morning.
Seven rattling carts rattled by.
"Spare my son", she said.

6. Choose for your three paragraph composition one of the following subjects:

How to make a fire without matches.
The Sky Pilot (by Ralph Connor).
Frontenac.
A young Fur Trader (imaginary).
An amusing adventure.
How to be healthy.
Queen Elizabeth.
Alberta is a Good Place to Live In.
The Threshing Supper.
How Mother was Lost.
One Rainy Saturday.

(*a*) Make a plan for your Composition.

(*b*) Write it.

GRADE VII.

GRAMMAR.

1. Select the sentences from the following list, supply the end punctuation, and tell the kind of sentence:

(*a*) He commanded his servant to appear before him

(*b*) This same Jesus whom thou persecutest

(*c*) Go

(*d*) A tender child of summers three, seeking her little bed at night

(*e*) While the waters near me roll

(*f*) Was he not a faithful animal

2. Analyze:

(*a*) Mary, call the cattle home across the sands of Dee.

(*b*) Roll up that map;
We shall not want it for twenty years.

(*c*) Lack of desire is the greatest riches.

(*d*) Silently, one by one, in the infinite meadows of heaven
Blossomed the lovely stars, the forget-me-nots of the angels.

(*e*) After much hard work, John became the highest pupil in his class.

(*f*) In the heart of the old tree in the forest, a nest had been built by a family of squirrels.

3. State the part of speech of each of the words in italics:

(*a*) *Why did* Henry and his cousin *from* the country *leave so suddenly without any* explanation?

(*b*) *How well* the guide knows the way.

(*c*) *No,* we have *no* bananas.

(*d*) *That "that" is used* correctly in this sentence, but incorrectly in that *one.*

(*e*) *Blessed* are the *meek.*

(*f*) Polly, *put* the kettle *on.*

(*g*) *Many are called but* few are chosen.

(*h*) *What part* of speech is the word *"verb"?*

(*i*) *What* did you say?

(*j*) *Oh, what* a pal was Mary.

(*k*) The seraph *band each* waved *its* hand.

4. Make nouns for the following adjectives:
Noble, pure, true, wise, silent, vigorous.

5. Write out the phrases in the following and classify them as adjective or adverb phrases:

On the arrival of the French, the English formed in line in three divisions. The division in front was under the control of the Black Prince.

6. Give an example in a sentence of each of the following:

(*a*) Noun—object of a verb.

(*b*) Noun—used to complete a verb (complement).

(*c*) Adjective—used to complete a verb (complement).

(*d*) Pronoun—subject of a verb.

(*e*) Possessive form of "she."

(*f*) Possessive form of "it".

7. Correct where necessary and state your reason:

(*a*) Do it like I did.

(*b*) I would of went, had you asked me.

(*c*) All the boys went but him.

(*d*) I will be a big sunflower some day, thought the seed.

(*e*) He went for to get some wood.

(*f*) Possessive form of "it."

GRADE V.

SPELLING.

NOTE.—Pupils should number the words as they are written. One mark should be deducted for each mis-spelled word.

1.

1. eighteen
2. business
3. earn
4. knives
5. o'clock
6. prayer
7. throat
8. weight
9. whistling
10. whose
11. worst
12. answered
13. candle
14. delightful
15. exchange
16. February
17. hurrying
18. mighty
19. officer
20. product
21. restore
22. retiring
23. shouted
24. spread
25. stranger
26. although
27. engagement
28. friendly
29. loose
30. lovely
31. ocean
32. pasture
33. sailor
34. southern
35. already
36. fashionable
37. measure
38. obey
39. telephone
40. beautiful
41. pleasure
42. whom
43. article
44. debt
45. guest
46. belief
47. lose
48. seize
49. usually
50. having

2. Write sentences using the words numbered 43, 44, 36, 42, 32, 29, 21, 2, 10, and 35, in question 1 above in such a way as to show their meaning.

3. Write sentences containing each of the following pairs of words, e.g., clerk, coach—My clerk owns a coach.

(*a*) question, difficult.

(*b*) valley, towards.

(*c*) student, promise.

(*d*) judge, gentleman.

(*e*) farther, desert.

4. Write from dictation the following paragraph from the Canadian Readers Book V, page 103, beginning—"Here" continued Moses.....to the end of the selection.

SPELLING.

NOTE.—Pupils: Number the words as you write them.
Teachers: Deduct one mark for each mis-spelled word.

1.

1. women
2. guess
3. minute
4. whether
5. separate
6. patient
7. where
8. knowledge
9. familiar
10. examine
11. cellar
12. medicine
13. justice
14. diamond
15. citizen
16. attention
17. except
18. earnest
19. unknown
20. observe
21. folks
22. fault
23. assure
24. object
25. taught
26. request
27. repair
28. courage
29. avenue
30. coast
31. weather
32. require
33. palace
34. manage
35. feature
36. engine
37. afterwards
38. regular
39. piece
40. meant
41. grammar
42. generous
43. choose
44. accept
45. occur
46. region
47. strength
48. college
49. effect
50. influence

2. Use the words numbered 35, 43, 32, 28, 23, 20, 18, 17, 13 and 4, in Question 1 above, in sentences, in such a way as to *clearly* show their meaning.

3. Write *thoughtful* sentences containing each of the following pairs of words. For example—*balance, capital:*—He spent the balance of his capital.

(*a*) league, arrange.

(*b*) merchant, accompany.

(*c*) vessel, describe.

(*d*) height, increase.

(*e*) prefer, square.

4. Write from dictation the following paragraph from the Canadian Readers, Book V, page 414, beginning—"All other good gifts.....nothing of wasting time."

SPELLING.

NOTE.—Pupils should number the words as they are written. One mark should be deducted for each mis-spelled word.

1.

1. recognize
2. original
3. occasion
4. necessary
5. especially
6. develop
7. prophet
8. frequent
9. foreigner
10. councillor
11. compel
12. benefitted
13. acquaintance
14. acceptable
15. absolutely
16. imagine
17. extreme
18. carriage
19. scene
20. opposite
21. injure
22. accomplished
23. language
24. encourage
25. century
26. appearance
27. exercise
28. whether
29. voyage
30. quarrelling
31. mention
32. grievous
33. election
34. cultivate
35. conqueror
36. salary
37. future
38. exacting
39. education
40. depth
41. continuous
42. averaging
43. advantage
44. wealth
45. treat
46. treasure
47. shoulder
48. message
49. estate
50. awaiting

2. Use correctly in a sentence each of the following words: loose, angle, past, course, witch, effect, receipt, precede, currant, desert.

Write ten other words with which these are often confused. Use them correctly in sentences.

3. Write sentences containing each of the following groups of words, e.g., words—struggle, property, protect. "He died in a struggle to protect his property."

(*a*) demand, captain, punishment.

(*b*) conceal, warrior, wounded.

(*c*) colony, accident, governor.

(*d*) operation, advise, immediate.

(*e*) entertainment, supply, theatre.

4. Write from dictation the following paragraph—"Introduction to Literature"—page 161, beginning, "One night a fortnight ago it stopped.....for two and a half minutes."

GRADE V.

HISTORY AND CITIZENSHIP.

1. (*a*) What *two* fur trading companies built trading posts in Western Canada?

(*b*) From where did the fur traders come? Name *two* places.

(*c*) Describe in an interesting way how trade or "barter" was carried on between Indian and trader without the use of money.

2. Write a note on the hardships of the first settlers of the Red River,

Or

(*a*) Who was Lord Selkirk?

(*b*) What important part did he take in the progress of the Canadian West?

3. Tell the story of Alexander Mackenzie's overland journey to the Pacific, *or* the Explorations of La Verendrye and Sons.

4. (*a*) Account for the beginning of any *three* of the following centres of population: Regina, Indian Head, Macleod, Prince Albert, Edmonton.

(*b*) Tell how any *three* got their names.

5. (*a*) How did the early settlers travel and transport their goods over the western plains?

(*b*) Write a short story of the surveying *or* of the building of our first railway, the main line of the Canadian Pacific.

6. Describe an interesting experience of one of the early Missionaries to the West, *or* Write a brief outline of the duties of the Royal North West Mounted Police in maintaining law and order in the pioneer days of the West.

7. (*a*) Tell *three* ways in which you may, by your actions, win the respect of your teacher and classmates.

(*b*) State *three* ways in which you might prove yourself a useful citizen to your community.

(*c*) Relate a brief story about *one* of the following, Jason, Beowulf, Arthur or Robin Hood, bringing out one or more good qualities as, honour, justice, bravery or self-respect.

GRADE VI.

HISTORY AND CITIZENSHIP.

1. (*a*) Write a note on the Feudal System in England during the Norman Period.

(*b*) Write a brief description of the castle of a Norman baron.

2. (*a*) It was considered an honor and a duty for English Knights to take part in the Crusades. Why?

(*b*) Briefly relate a story about Richard I while taking part in the Crusades.

(*c*) As a result of the Crusades, what good effects were felt upon English life?

3. Give the chief historical event connected with the life of *any three* of the following: Robert Bruce, Canute, Caxton, Henry V, Joan of Arc.

4. (*a*) Tell of the most famous voyage of discovery made by *each* of the following early explorers,—The Cabots, Vasco da Gama, Magellan.

(*b*) Describe in some detail *one* of these voyages.

5. Briefly, but carefully, outline the explorations of La Salle.

OR

Describe the Jesuit Mission to the Huron Indians, touching on the following topics:

The Jesuit Missionaries
The Mission Stations
The work of the Missionaries
The destruction of the Mission.

6. Describe the work of Champlain that earned him the right to be called "The Founder of New France."

7. Suppose you wish to organize an Athletic Club or a Boys or Girls' Club in your school or community.

(*a*) Tell how you would conduct the organization meeting.

(*b*) What officers and committees would be necessary?

(*c*) How would they be appointed?

GRADE VII.

HISTORY AND CITIZENSHIP.

1. (*a*) Describe *or* illustrate by a drawing, the plan of the typical manorial village of the thirteenth and fourteenth centuries.

(*b*) Describe the inhabitants of the village and their work, *or* Describe the system of agriculture on the manor lands.

2. Account for any *three* of the following changes in England during the fourteenth and fifteenth centuries:

The popularity of sheep-raising.
The passing of villeinage.
The Growth of Towns.
Craft Guilds.
Fairs and Markets.

3. Write a note on Elizabethan seamen, *or* Account for the rise of Protestantism during the Tudor Period.

4. Write notes on any *three* of the following:

The Pilgrim Fathers, The beginning of the Hudson's Bay Company, Ship Money, The Navigation Act, The Treaty of Utrecht.

5. Tell of the important work of any *two* of the following in the growth of French Canada: Talon, Laval, Frontenac.

6. (*a*) Why was the Quebec Act passed? When?

(*b*) State the clauses of this Act.

7. (*a*) State the causes of the American Revolutionary War.

(*b*) What changes to Canada's boundaries took place as a result of this war?

(*c*) Account for the growth of Upper Canada and the Maritime Provinces following the Declaration of Independence.

8. Write a criticism of any *two* clauses of the Constitutional Act,

OR

State the effects of the War of 1812-13-14 on Canada's National life.

9. (*a*) What is public property?

(*b*) Name some public property in your community.

(*c*) Tell the history of "wheat" from the time it leaves the field until it is returned in the form of flour. Take into account the following,—transportation, manufacture, the middleman.

(*d*) Name *three* important articles of manufacture required by the farmer. Name *three* products of the farm required by the man of industry.

GRADE V.

ARITHMETIC.

1. Find the quotient and the remainder when 372008 is divided by 984.

2. At $1.38 per square yard, what will it cost for linoleum for a kitchen floor 9 ft. by 12 ft.?

3. Fill in all blanks as has been done in the first line.

32 feet=10 yards and 2 feet.

24 yards=.....rods and.....yards.

220 sq. ft.=.....sq. yds. and.....sq. ft.

1 sq. mile=.....acres.

35 quarts=.....gallons and.....quarts.

$3\frac{1}{2}$ lbs.=.....ounces.

359 lbs. oats=.....bushels.....lb. oats.

$\frac{3}{4}$ hour=.....minutes.

4. Find the total weight of 40 bushels wheat, 56 bushels oats, 25 bushels barley and 50 bushels of potatoes.

5. On June 10th, 1924, Peter Adams bought from Edward Mills the following goods:

34 lb. sugar at $7\frac{1}{2}$c a lb.
5 yds. cloth at $2.25 a yd.
$2\frac{1}{2}$ bu. potatoes at 90c a bu.
$1\frac{1}{2}$ gallons syrup at 40c a qt.
$2\frac{1}{4}$ lb. cheese at 12c a lb.

Adams paid cash for the goods. Make out the receipted bill.

6. A field is 80 yards long and 60 yards wide. If woven wire costs 12c a foot what will it cost for enough wire to go around the field?

7. Add:

Miles	rods	yards
2	20	3
15	136	4
28	79	$2\frac{1}{2}$
9	288	3.

8. A school district is 4 miles long and $3\frac{1}{2}$ miles wide. How many acres of land in the district?

How many quarter sections in the district?

9. Fill in the blanks in the following:

$\frac{1}{2} = \frac{\quad}{4}$ $\qquad$ $\frac{\quad}{4} = \frac{9}{12}$ $\qquad$ $\frac{2}{3}$ of $12 =$

$\frac{2}{3} = \frac{\quad}{24}$ $\qquad$ $\frac{3}{8}$ of $16 =$ $\qquad$ $\frac{3}{4} + \frac{1}{8} = \frac{\quad}{24}$

$\frac{1}{2} + \frac{1}{3} = \frac{\quad}{12}$ $\qquad$ $\frac{1}{\quad} = \frac{4}{12}$ $\qquad$ $\frac{2}{3} - \frac{1}{4} = \frac{\quad}{12}$

10. On a certain day school opened at 9.00 a.m. and closed at 4.00 p.m. Intermissions came at the following times: 10.30-10.45 a.m., 12.00 noon-1.30 p.m., 2.30-2.45 p.m. For how many minutes was the school in session that day?

GRADE VI.

ARITHMETIC.

NOTE.—Accuracy in solutions and in statements is required.

1. How many cubic yards of earth are removed in excavating a cellar 14 ft. long, 11 ft. wide and 9 ft. deep?

2. A stick is 5 ft. 8 in. long. If it is cut into three equal lengths, how long will each piece be?

3. Find the value of each of the following:

$\frac{2}{3} + \frac{3}{4} =$ $\qquad$ $\frac{5}{6} \div \frac{3}{2} =$ $\qquad$ $\frac{4}{9} \div 3 =$ $\qquad$ $\frac{4}{9} \times \frac{5}{7} =$

$\frac{5}{6} - \frac{1}{3} =$ $\qquad$ $\frac{5}{8} \div 7\frac{1}{2} =$ $\qquad$ $12 \div \frac{1}{3} =$ $\qquad$ $\frac{8}{9} \times 4\frac{1}{4} =$

4. Reduce these fractions to their lowest terms:

$\frac{70}{105}$ $\qquad$ $\frac{52}{91}$ $\qquad$ $\frac{42}{98}$ $\qquad$ $\frac{132}{165}$ $\qquad$ $\frac{68}{85}$

5. A rug is 9 ft. 6 in. long and 6 ft. 3 in. wide.

(*a*) Find its perimeter.

(*b*) Find the number of square yards of floor covered by the rug.

6. Write as vulgar fractions in their lowest terms and then find their sum:

75% $\qquad$ 20% $\qquad$ $12\frac{1}{2}\%$ $\qquad$ 5%

7. A train goes $184\frac{3}{4}$ miles in 6 hours. How far does it go in $1\frac{1}{3}$ hours?

8. Chas. Smith bought of the Great West Hardware Co., Edmonton, as follows: July 3rd, 1 Kitchen range at $65.50, 7 stove pipe sections at 35c each; July 15th, 3 quarts of white paint at $2.40 a gallon; July 28th, 20 feet of wire netting at 40c a yard, $2\frac{1}{2}$ lbs. staples at 15c a lb.

On Sept. 12th Chas. Smith paid cash on account $35. Balance the account on October 1st.

9. Find $12\frac{1}{2}\%$ of 3 ft. 8 in.
Find $33\frac{1}{3}\%$ of 2 hours.
Find 20% of 14 rods, 3 yards.

10. A man who had $7.75 spent $4.25. What fraction of his money had he left?

GRADE VII.

ARITHMETIC.

1. Simplify 45.6—9.085+0.854+46.974—6.7532—2.008.

2. A rectangular tank 30 inches long, 24 inches wide and 18 inches deep is full of ice. How many cubic feet of ice are there? If a cubic foot of ice weighs 56.818 pounds, find the weight of the ice in the tank.

3. Change the following common fractions to decimals:

$$\frac{1}{2} \quad \frac{31}{50} \quad \frac{1}{25} \quad \frac{17}{20} \quad \frac{3}{400}$$

4. Do the following short division questions:

8 | .32 .06 | 30 2.4 | .072

11 | .077 .6 | .0024 .12 | 1.44

5. A boy had $6.25 and spent $1.50 of it. What percentage of his money has he left?

6. Find $12\frac{1}{2}\%$ of 32c.
Find 120% of $1.80.
Find 6.5% of $12.00.

7. A barn floor 18 ft. wide and 30 ft. long is laid with planks $2\frac{1}{2}$ inches thick. Find the cost of the timber at $28.60 per M feet, board measure.

8. Find the simple interest on $454 from January 10th, 1925, to June 20th, 1925, interest being at the rate of 7% per annum.

9. In laying a certain sidewalk 2140 cubic yards of concrete were used. It cost $1.77 a cu. yd. for mixing and placing the concrete.

The material for the concrete was as follows: 3010 barrels of cement at $3.02; 1377 cu. yd. broken stone at $1.37; 393 cu. yd. screened pebbles at 90c; 459 cu. yd. gravel at 67c; 500 cu. yd. sand at $1.78.

Find the total cost of the sidewalk.

GRADE V.

ELEMENTARY SCIENCE.

1. Explain how a spider secures its food.
Of what does this food consist?
In what *three* ways does a spider get from place to place?
Name *two* ways in which a spider is different from any insect.

2. Name a bird you know well.
Tell *three* ways in which it differs from other birds.
What does this bird eat?
Where does it build its nest?
Of what materials is the nest made?
What colour are the eggs?
Where does it spend the winter?

3. Of what use are the following to people?
The horns of cattle;
The wool from sheep;
The bristles from pigs;
The hide from horses;
The skin from coyotes.

4. What use is made of the following:
The wheat grain;
The flax plant;
The flax seed;
The field turnip;
The spruce tree?

5. What regions lie North, South, East and West of Alberta?
Name the mountains and high hills in Alberta. Where are these mountains and hills?
Give the names of *three* rivers in Alberta; tell in what direction each flows and where each empties.

6. What city is closest to your school?
Tell *five* ways in which the people in this city make a living.

7. What is the function of each of the following:
The teeth;
The saliva;
The liver;
The gastric juice?

8. Why should a boy or girl abstain from smoking cigarettes?
Why should a pupil who sits up straight in his seat learn more quickly than if he were to slouch in his seat?

GRADE VI.

ELEMENTARY SCIENCE.

1. Make a sketch map of North America. Place on it the following:

The mountainous areas;

The river systems;

The national subdivisions and the approximate population of the most important of these divisions.

2. Make a sketch map of Canada and mark on it the natural subdivisions and the political subdivisions.

On each natural subdivision mark *three* important natural products.

Compare the value of the Pacific shipping ports with that of the Atlantic shipping ports (1) to all Canada, (2) to Western Canada.

3. Explain, by referring to the motions of the earth, how the following are caused:

Night;

Winter.

4. Describe the purification of the blood in the lungs.

Tell of *two* habits to be acquired that will help the lungs to do their work well.

5. Show, in *three* ways, how *each* of the following is better fitted to live in its own environment than in any other:

The fish;

The frog;

The gopher.

6. Name *five* ways in which heat is used in our activities.

What are *two* differences between hard well water and soft rain water?

7. What are the natural sources of humus in the soil?

Show *two* ways in which a farmer may add humus to the soil.

Describe an experiment by which one might separate the sand, clay and humus in a sample of soil.

8. Outline an experiment to show that air really takes up space.

What does the atmosphere contain that is used in plant growth?

GEOGRAPHY, AGRICULTURE AND HYGIENE.

1. Name *three* important centres of production of wheat in addition to Canada.
Discuss the importance of *one* of these as a competitor of Canada in the markets of the world, under the heads,—
Distance from the markets,
Quality of wheat,
Cost of production.

2. Describe the preparation of the seedbed for the growing of winter rye.
Show the importance of winter rye in the crop rotation in Alberta.

3. Name *two* characteristics by which Dutch clover might be distinguished from Alsike clover.
Show in *three* ways why alfalfa is such an important farm crop.

4. (*a*) Make a diagram to illustrate the structure of the leaf. Name *three* functions of the leaf,

OR

(*b*) Give the distinguishing characteristics of *one* breed of general utility poultry.
Describe the care of the flock for winter-laying, giving the particulars of the ration.

5. Make a sketch map of South America, showing the mountainous areas, the great plains, the river systems and the equator.
Mark on *each* great area *three* important products.

6. Describe the climate of the West coast of Europe.
What factors are influencing this region so that the climate is improved?

7. Give Geographical reasons for the isolation of China and Japan.
Show how these factors causing isolation have been overcome within the past fifty years.

8. Name *two* sources for *each* of the following products:
sugar, rubber, gold, wheat, wool, tobacco, olive oil, silk, coffee, rice.

9. What organs eliminate the waste material from the body?
Explain how the body (*a*) counteracts a high temperature, (*b*) combats a low temperature.

10. Distinguish the functions of the motor and sensory nerves.
What effect does the use of alcohol have on the nervous system of the growing child?

GRADE V.

ART.

Answer any *three* questions only.

Teachers should have available for the use of the class a copy of "Ploughing" (Rosa Bonheur).

1. (*a*) Tell briefly what you see in the picture.

(*b*) Make a list of all the things in the picture that give the idea of movement.

(*c*) What do you find the most interesting part of the picture?

(*d*) Give two reasons why the eye keeps on travelling back to this interesting part.

(*e*) What time of day does this scene represent?

(*f*) Is this a Canadian scene? Give reasons for your answer.

OR

Turn to page 11 of Book V of the New Canadian Reader. Read "The Moonlight Sonata" first if you have not done so.

(*a*) Briefly describe what you see in the picture.

(*b*) Who is the man sitting beyond the piano, Beethoven's friend or the brother of the girl? What makes you think so?

(*c*) How has the artist made Beethoven's face the main point of interest in the picture?

(*d*) Tell what you think these three people are thinking, judging by their attitudes and their faces.

(*e*) Why did the artist put that picture on the wall at the left of his picture?

(*f*) Would you like a large copy of this picture framed and hung in your home? Give reasons why you would or would not.

2. Plan out, and finish as far as time allows, a simple poster using the words, "Protect Our Birds." The sheet should be margined, blocked off to show the spacing for lettering and for a simple decoration. Make the lettering about 1″ high, $\frac{3}{4}$″ wide and $\frac{1}{4}$″ thick. Finish at least one word and space in the others. Draw the decoration ready for coloring in flat washes. Color the poster if possible or write at the bottom a good definite color scheme showing for what part of the work you would use each color in your scheme.

3. (*a*) What do you understand by complementary colors?

(*b*) Name three pairs of complementary colors.

(*c*) How can you grey down any color?

(*d*) For what would you use complementary colors at full intensity (ungreyed)?

(*e*) For what would you use greyed complementary colors?

4. Make a careful drawing of the objects placed before you. No shading is required, but accents should be placed to denote the shadow edges. Margin the paper, place the objects carefully inside and finish by drawing a panel containing your initials placed so as to help the balance of your drawing.

NOTE FOR TEACHER:

(*a*) For Question 4 procure a simple cylinder or cylindrical object such as a jug and a hemispherical object such as a bowl, or a glass and half an orange may be used. Place them at about the height of the seat of a chair and between two rows of desks at the front. If more than two rows of pupils are answering this test, additional objects should be obtained. Place the bowl close to and a little in front of the cylindrical object.

(*b*) Allow 20 marks for each of the three questions answered, making a possible of 60 on the written test.

(*c*) Assess a mark on the booklet made during the year, allowing a possible 20 marks.

(*d*) Assess a mark on either the lampshade or the box made during the year, allowing a possible 20.

GRADE VI.

ART.

Answer any *three* questions only.

Teachers should have available for the use of the class a copy of "The Hay Wain" (Constable).

1. (*a*) Name briefly the things you see in this picture.

(*b*) What do you think the artist is trying to tell us?

(*c*) What part of the picture pleases you most? Why?

(*d*) Why did the artist use so many lines which were vertical, or horizontal, or nearly so?

(*e*) Do you think the artist wants you to look at one special part, or at the landscape as a whole? What are your reasons?

OR

Turn to page 305 of the New Canadian Reader Book V. Read the story that goes with the picture if you have not done so.

(*a*) Briefly describe what you see in the picture.

(*b*) To what two parts of the picture do your eyes keep coming back?

(*c*) Did the artist intend this? If you think so, tell what he did to cause this.

(*d*) Tell briefly what you think are the thoughts of the three persons in the picture.

(*e*) Why did the artist not draw the complete boat and the other six men?

2. Make a memory sketch showing a twig and [illegible] four leaves. Accent in places to show the parts nearest you, to hint at shadow edges and to give [illegible] work. (In other words, make your sketch to appear as real as possible.) Draw a neat rectangle around your drawing.

3. Make a motto, using line capital letters only, of the following: "If a thing is worth doing at all, it is worth doing well."

Place the motto in a rectangle about 7″ x 5″. Space in all the words and finish at least part of the letterings.

4. Draw the group of objects placed in front of you. Finish in accented pencil lines when you have the outline looking right.

See that your drawing is nicely placed on the paper and framed with a neat margin.

NOTE TO THE TEACHER:

(*a*) For Question 4 obtain a good sized book, such as a dictionary, and a closed chalk box. Place at about the level of the seat of a chair and between two rows of desks and at the front. If more than two rows of pupils are writing on this test, additional groups should be provided.

Place the book on the stand so that one long side is parallel to the eyes of the children (one point perspective). Place the chalk box on the book so that one corner is nearest to them (two point perspective).

(*b*) For each of the above three questions answered allow 20 marks, making a total of a possible 60 marks on the written test.

(*c*) Assess a mark on the booklet made this year, allowing a possible 20 marks.

(*d*) Assess a mark on either the lampshade or the sliding box made this year, allowing a possible 20 marks.

ART.

Answer any *three* questions only.

Teachers should have available for the use of the class a copy of "The Mill" (Ruysdael).

1. (*a*) What is the chief thing in the picture? Is there any need for anything more than this one thing to make a good picture? Why.

(*b*) What means has the artist used to lead the eye to the centre of interest?

(*c*) Name four things in the picture that denote the country it represents.

(*d*) What kind of weather is the artist portraying? What does he hint is going to follow?

(*e*) Do you think that the sails of the windmill are still or moving? Why? Are there any other parts of the picture that help your decision?

2. Plan a note book cover. This must include simple line or other border, the words "Art Notes", a suitable panel decoration, and the name or initials of the student.

This is chiefly a test of spacing. Plan a simple border, or line border with decorative corners. Inside this, block in panels for the words, the decoration and the student's name.

Draw in the letters to space them and finish part of them. Compose a pleasing panel and outline heavily to show decorative style. Draw in the name or initials.

Finish at least part of the border, including a corner. Use line letters modified to suit the needs of the problem.

3. Draw a rectangle $7'' \times 2\frac{1}{2}''$. Halve the long sides and join by a line, giving two rectangles $3\frac{1}{2}'' \times 2\frac{1}{2}''$. In these rectangles make a stencil border design based on flower, leaf and stem motifs, or fruit, leaf and stem. Make it simple, using large bold units to break the space pleasingly.

Color the design in flat washes, choosing a definite color scheme. Write underneath the design the name of the color scheme you have used, such as complementary, analogous, etc.

4. Make a careful drawing of the objects placed in front of you. Having made them look as right as possible, check by your knowledge of perspective and then finish the drawing by shading with pencil.

See that your drawing is well placed on the paper and surrounded by a neat margin.

NOTE TO THE TEACHER:

(*a*) For Question 4, place the objects at about the height of the seat of a chair and between two rows of desks, and at the front. The objects will be a large book, such as a dictionary, and an empty chalk box with the sliding lid half open.

Place the book so that it has one long side parallel to the eyes of the students (one point perspective) and the box upon the book but with one corner nearest the students (two point perspective). The lid should be opened towards the students.

(*b*) Allow a possible 25 marks for each of the three written answers to this test and 25 marks for the completion of the booklet made during the year.